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DYNAMIC SCIENCE, INC.
In-Depth Accident Investigation

Contract DTNH22-94-D-27058
Case DSI-95-AB-25

1996

1. Report No. DSI-95-AB-25	2. Government Accession No.	3. Recipient Catalog No.	
4. Title and Subtitle In-Depth Accident Investigation		5. Report Date 1996	
		6. Performing Organization Report No.	
7. Author(s)		8. Performing Organization Report No. DSI-95-AB-25, Task 041	
9. Performing Organization name and Address Dynamic Science, Inc. 530 College Parkway, Ste. K Annapolis, MD 21401		10. Work Unit No. (TRIS)	
		11. Contract or Grant no. DTNH22-94-D-27058	
12. Sponsoring Agency Name and Address U.S. Dept. of Transportation (NRD-32) National Highway Traffic Safety Administration 400 7th Street, SW Washington, DC 20590		13. Type of report and period Covered In-Depth, 1996	
		14. Sponsoring Agency Code	
15. Supplemental Notes This air bag investigation involving 3-month old female, right front occupant, in a rear facing child seat. The air bag struck the top rear of the child seat causing severe head trauma.			
16. Abstract This two vehicle collision occurred at the intersection of a one-way roadway, and an undivided two-way roadway. Vehicle 1 was traveling westbound in the right lane of a two lane one-way street approaching the intersection and intending to go straight through at a stated speed of 40 km/h (25 MPH). Vehicle 1 was equipped with both a driver's and right front side passenger air bags. The right front seat was occupied by a 3-month-old female seated in a Gerry Guard with glide infant car seat model 628. The child seat was in the rearward facing position with the manual lap/shoulder belt fastened on the seat belt hooks of the child seat without the use of a locking clip. Vehicle 2 was traveling southbound on a two-way divided roadway. Vehicle 2 pulled out directly in front of Vehicle 1 and the front end of Vehicle 1 struck the left side of Vehicle 2. On impact, both of the air bags in Vehicle 1 deployed. On impact with Vehicle 2, the air bag module cover struck the top rear of child seat and the top rear of the child seat shattered into many pieces. The air bag began its unfolding process, and contacted the rear area of the child seat causing rearward acceleration into the back head area of the child. This caused serious trauma to the child's head (subdural hematoma, skull fracture). She was transported to a local hospital via ambulance, and she was hospitalized for eleven days.			
17. Key Words Air bag, deployment, rear facing child seat.		18. Distribution Statement	
19. Security Classif. (of this report) Unclassified	20. Security Classif. (of this page)	21. No of pages 21	22. Price

TECHNICAL SUMMARY

CONTRACTOR: Dynamic Science, Inc.
CONTRACT NUMBER: DTNH22-94-D-27058
CASE NUMBER: Case DSI-95-AB-25

This case was initiated in response to the deployment of a right front air bag and the injuries that were sustained by the right front occupant in a rear facing child seat.

This two vehicle collision occurred in _____ in _____ 1995 at 0648 hours. The collision occurred at the intersection of a one-way roadway, and an undivided two-way roadway. The weather was clear, the roadways were bituminous, dry, straight and level surfaces. There were no traffic controls for the westbound one-way traffic. There were stop signs at the intersection for north and southbound traffic.

Vehicle 1 a 1994 Ford Aspire driven by a 33 year old female, was traveling westbound in the right lane of a two lane one-way street approaching the intersection and intending to go straight through at a driver stated speed of 40 km/h (25 MPH). Vehicle 1 was equipped with both a driver's and right front side passenger's air bag. The passenger's side air bag is a mid-mount configuration. The driver was wearing the available 3-point manual lap/shoulder restraints. The right front seat was occupied by a 3-month-old female seated in a Gerry Guard with glide infant car seat model 628. The child seat was in the rearward facing position with the manual lap/shoulder belt fastened on the seat belt hooks of the child seat without the use of a locking clip. The child seat shoulder harness appears to have been used according to statements made by the driver of Vehicle 1 to police, and statements made by the tow truck operator.

Vehicle 2, a 1991 Chevrolet Geo Metro (LSi) driven by an 88 year old male, was traveling southbound on a two-way divided roadway. Vehicle 2 stopped at the intersection and then proceeded to cross it at a stated speed of 16 km/h (10 MPH).

Vehicle 2 pulled out directly in front of Vehicle 1; the driver of Vehicle 1 braked but was unable to avoid colliding with Vehicle 2. The front end of Vehicle 1 struck the left side of Vehicle 2. On impact, both of the air bags in Vehicle 1 deployed. A damage and trajectory run of the SMASH reconstruction algorithm determined that Vehicle 1 sustained a -14 km/h (-9 mph) longitudinal velocity change, and Vehicle 2 sustained a -9 km/h (-6 mph) longitudinal velocity change.

After impact, Vehicle 1 rotated approximately 25 degrees counterclockwise and came to final rest about six feet from the point of impact facing south-west. Vehicle 2 continued forward and ran over the west curb causing damage to the right front tire/rim. Vehicle 2 came to final rest on the west sidewalk heading south along side a tree.

The driver of Vehicle 1 did not report any injuries.

Vehicle 1 was equipped with manual lap/shoulder restraints at the LF, RF, and LR, RR seat positions. The center rear seating position was equipped with a lap belt. According to the owner's manual, the lap/shoulder belts are equipped with dual locking-mode belt retractors. In

the vehicle sensitive (emergency) locking mode, the retractor will allow the occupant freedom of movement, locking tight only on hard braking, hard cornering, or impacts of approximately 8 km/h (5 mph) or more. In the automatic locking mode the retractor will remain locked and does not allow the occupant freedom of movement. This mode must be used when installing a child seat. To switch the retractor from the emergency locking mode to the automatic locking mode the lap/shoulder belt is buckled and the stored belt is pulled all the way out until a click is heard. The belt is then allowed to retract, a clicking sound is heard as the belt retracts. The vehicle owner's manual further states to follow the instructions and warnings provided by the child seat manufacturer's concerning its installation and use. The child seat manufacturer recommends the use of a locking clip with this type of seat belt (i.e., the latch plate slides freely along the belt webbing).

It is the opinion of the investigator that the belt retractor of the right front passenger lap/shoulder belt was in the vehicle sensitive (emergency) locking mode.

The right front occupant, a 3-month-old child, was seated in a supine position in a Gerry Guard with glide infant car seat model 628. The child seat is a two piece seat, the top part being the seat and the bottom being a base which can be converted to a glide, i.e. a rocker. The top part of the seat appears to have been properly attached and locked to the child seat base. The child seat was in a rearward facing position with the manual lap/shoulder belt fastened on the seat belt hooks of the child seat but no locking clip was used as is recommended in the child seat manual with this type of seatbelt (i.e., the latch plate slides freely along the belt webbing). One of the carrying handles was in the carrying position rather than behind the seat as recommended when lap/shoulder restraints are used. The shoulder harness appears to have been used according to statements made by the driver of Vehicle 1 to police, and statements made by the tow truck operator.

As Vehicle 1 decelerated during pre-impact braking, the child seat likely tilted forward and moved forward striking the right dashboard area. There are grayish paint transfers from the child seat in several spots on the right side of the dashboard (see Figure 1). This placed the top rear area of the child seat over the air bag module cover.

On impact with Vehicle 2, the air bag module cover struck the top rear of child seat and the top rear of the child seat shattered into many pieces (see Figure 2 and police photo # 047). At the same time, the air bag began its unfolding process, and contacted the rear area of the child seat causing rearward acceleration into the back head area of the child. The combined forces of the module cover striking the top rear of the child seat and the rearward acceleration by the deploying air bag, caused serious trauma to the child's head consisting of a right occipital fracture, a small subdural hematoma located in the right occipital area just below the fracture, a right occipital hematoma, all were caused by the back of the child seat. She also had an abrasion to the top of her forehead, a hematoma to her forehead, and an abrasion under her left eye. She was transported to a local hospital via ambulance, and she was hospitalized for eleven days. There is no other data available as to the exact nature of right front occupant's injuries, the mother did not want to cooperate with this investigation and the hospital would not release medical records without her authorization.

The driver of Vehicle 2 was wearing the automatic 3-point lap/shoulder belts. He sustained injuries of a fractured pelvis and ankle. He was transported and hospitalized, and expired five

days later of complications of ischemic heart disease, precipitated by blunt force injuries sustained in the collision.

Both vehicles were towed from the scene due to damage. Vehicle 1 was totaled by the insurance company and stored outdoors for auction where it was inspected forty-nine days after the collision. Vehicle 2 was towed to the towing company's holding lot, and stored outdoors where it was inspected fifty days after the collision.

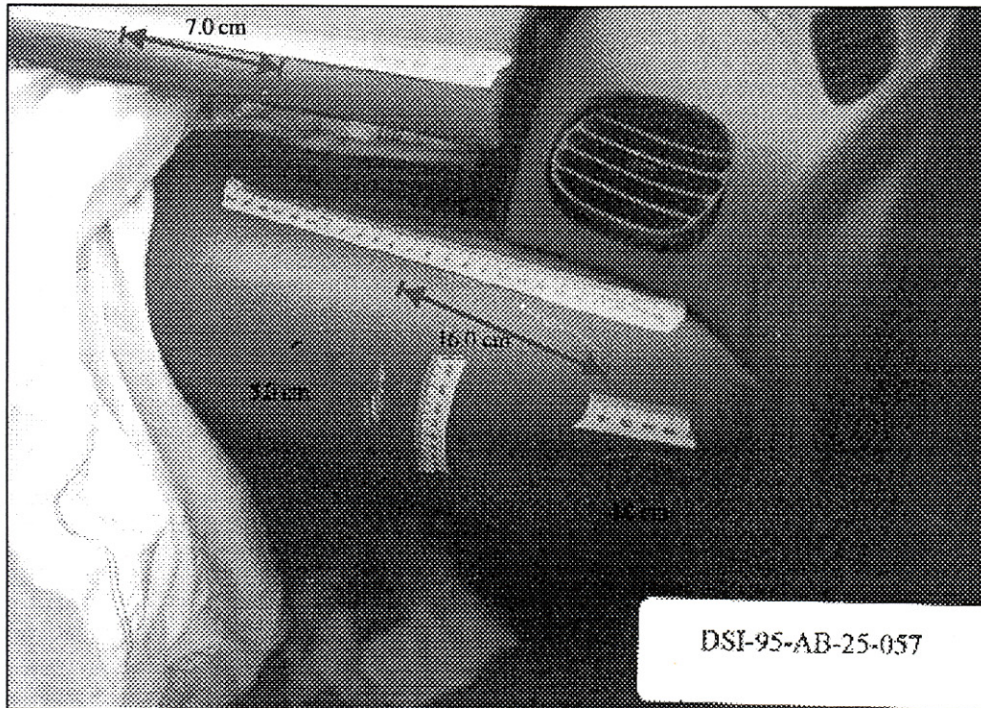


Figure 1. Child seat contact with dashboard and module cover.



Figure 2. Police photo magnified to show damage to the top of the child seat, photo #114.

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The crash investigation process is an inexact science which requires that physical evidence such as skid marks, vehicular damage measurements, and occupant contact points be coupled with the investigator's expert knowledge and experience of vehicle dynamics and occupant kinematics in order to determine the pre-crash, crash, and post-crash movements of involved vehicles and occupants.

Because each crash is a unique sequence of events, generalized conclusions cannot be made concerning the crashworthiness performance of the involved vehicle(s) or their safety systems.

DYNAMIC SCIENCE, INC.
ACCIDENT INVESTIGATION
CASE NUMBER: DSI-95-AB-25

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ACCIDENT DATA:

Location:

Area/Type:

Urban

Date/Time:

/ 0648 Hours

Accident Type:

Vehicle to Vehicle / Angle - Front to Side

Injury Severity:

Vehicle 1:

Driver, no injuries reported
RF Occupant, AIS-4

Vehicle 2:

Driver, AIS-3 (Fatal)

AMBIENCE:

Viewing Conditions:

Good

Cloud Cover:

Clear

Precipitation:

None

Temperature:

6.1° C (43° F)

Road Surface:

Dry

ROADWAY:

	VEHICLE 1	VEHICLE 2
Type:	Two-lane, one-way	Two-lane, undivided
Width:	11.1 M (36.3 ft.)	9.8 M (32.3 ft.)
Traffic Density:	Heavy	Moderate
Median:	None	None
Edge:	Concrete curbs on left and right	Concrete curbs on left and right 14 cm (5 in) high
Surface:	Bituminous	Bituminous
Reported Defects:	None	None
Co-efficient of Friction (est.):	0.70	0.70
Vertical Alignment:	Level	Level
Horizontal Alignment:	Straight	Straight

Traffic Controls:

	VEHICLE 1	VEHICLE 2
Signals:	None	None
Signs:	None	Standard stop sign
Speed Limit:	48 km/h (30 MPH)	40 km/h (25 MPH)
Markings:	Single painted lines denoting lane separation	None

VEHICLES:

	VEHICLE 1	VEHICLE 2
Description:	1994 Ford Aspire 4-door hatchback	1991 Chevrolet Geo Metro (LSi) 2-door hatchback
Odometer:	27,112 kilometers 16,847 miles	22,929 kilometers 14,248 miles
Engine:	I 4 / 1.3 L	I 3 / 1.0 L
Vehicle Modifications:	None	None
Tire Condition:	Good	Good
Manual Restraints:	Three-point manual lap/shoulder restraints at LF, RF, LR, and RR seating positions.	Three-point manual lap/shoulder restraints at LR, and RR seating positions.
Automatic Restraints:	Driver and passenger side air bags	Three-point non-motorized lap/shoulder restraints at LF, RF seating positions.
Reported Defects:	None	None
Cargo:	None	None
Windshield Damage:	Cracked by RF air bag, and module cover.	Cracked by impact forces.
Fleet:	No	No
Tow Status:	Towed due to damage	Towed due to damage

**VEHICLE DAMAGE:
IMPACT #1, V1 vs. V2**

	VEHICLE 1	VEHICLE 2
Object Struck:	Vehicle 2	Vehicle 1
Event Number:	01	01
CDC:	01FDEW1	10LYEW2
Maximum Crush:	17.0 cm (6.7 inch)	9.2 cm (3.6 inch)

VEHICLE VELOCITY ESTIMATES:

	VEHICLE 1	VEHICLE 2
Total Delta V:	16 km/h (10 mph)	24 km/h (15 mph)
Impact Speed:	35 km/h (22 mph)	38 km/h (23 mph)
Longitudinal Delta V:	-14 km/h (-9 mph)	-9 km/h (-6 mph)
Lateral Delta V:	-7 km/h (-4 mph)	22 km/h (13 mph)
Energy Dissipation:	16868 Joules (12440 FT-LB)	11331 Joules (8356 FT-LB)

The Delta Vs were calculated using the damage and trajectory portions of the SMASH reconstruction algorithm with the following adjustments: The trajectory portion of SMASH was run with the assumption that the minor impact with the curb (Impact #2), and with the tree (Impact #3) did not substantially alter its "virtual rest position and orientation." Impact and rest positions were plotted using police measurements. CRASH L represents the undeformed end width, the crush profiles were obtained from a complete inspection of Vehicle 1, and a partial inspection of Vehicle 2. The results fit the collision model and appear reasonable for Vehicle 1, but appear high for Vehicle 2.

COLLISION SEQUENCE:

Pre-Crash: This two vehicle collision occurred in _____ in _____ 1995 at 0648 hours. The collision occurred at the intersection of a one-way roadway, and a two-way undivided roadway. The weather was clear, the roadways were asphalt, dry, straight and had level surfaces. There were no traffic controls for the east and westbound one-way traffic. There were stop signs at the intersection for north and southbound traffic. The posted speed limit is 48 km/h (30 MPH) for Vehicle 1, and 40 km/h (25 MPH) for Vehicle 2.

Vehicle 1 a 1994 Ford Aspire was traveling westbound in the right lane of a two lane one way street approaching the intersection and intending to go straight through at a driver stated speed of 40 km/h (25 MPH).

Vehicle 2, a 1991 Chevrolet Geo Metro (LSi) was traveling southbound on a two way divided roadway. Vehicle 2 stopped at the intersection and then proceeded to cross it at a stated speed of 16 km/h (10 MPH), directly in the path Vehicle 1. The driver of Vehicle 1 attempted to avoid the collision by braking.

Crash: The front of Vehicle 1 struck the left front driver's door of Vehicle 2. At impact, the forces exceeded the manufacturer's SRS threshold in Vehicle 1 and both the driver's side and right front passenger's side air bags deployed.

A damage and trajectory run of the SMASH reconstruction algorithm determined that Vehicle 1 sustained a -14 km/h (-9 mph) longitudinal velocity change, and Vehicle 2 sustained a -9 km/h (-6 mph) lateral velocity change.

Post Crash: After impact, Vehicle 1 rotated approximately 25 degrees counterclockwise and came to final rest about 1.8 m (6 ft) south-west from the point of impact facing south-west.

Vehicle 2 veered clockwise after impact in a south-west direction and ran over the west concrete curb causing damage to the right front tire/rim. Vehicle 2 then continued in a southerly direction on the sidewalk area and struck a tree with its left side causing minor damage. Vehicle 2 came to final rest on the west sidewalk heading south along side a tree some 9.1 m (30 ft) south-west from the point of impact with Vehicle 1.

Police activities

<u>Event</u>	<u>Event Time</u>
Accident	@ 0648 hours
Police dispatched	0651 hours
Police arrived	0657 hours

Rescue activities (Vehicle 1, right front occupant)

<u>Event</u>	<u>Event Time</u>
Accident	0648 hours
Rescue dispatched	Unknown
Rescue arrived	Prior to 0651 hours, they were already there when police arrived
Rescue departed	Unknown
Arrive at hospital	Unknown
Admitted	Unknown
Released	

This occupant was treated initially at the scene and then transported by ground ambulance to a local hospital.

Rescue activities (Vehicle 2, driver)

<u>Event</u>	<u>Event Time</u>
Accident	0648 hours
Rescue dispatched	Unknown
Rescue arrived	Prior to 0651 hours, they were already there when police arrived
Rescue departed	Unknown
Arrive at hospital	Unknown
Admitted	Unknown
Expired	@ 2200 hours

This occupant was treated initially at the scene and then transported by ground ambulance to a local hospital.

Supplemental**Restraint System:**

Vehicle 1 was equipped with two original manufacturer installed air bags, one in the driver's steering wheel hub and one on the right front passenger side, top mounted configuration above the glove box in the dashboard.

The driver's air bag measured 57.5 cm (22.6 in) in diameter and had two tethers and two vents. The steering wheel hub airbag compartment had an upper and lower flap. The upper flap measured 15.5 cm (6.1 in) by 11.3 cm (4.4 in), and the lower flap measured 14.4 cm (5.7 in) by 8.5 cm (3.3 in). The right front passenger's air bag compartment had a single flap which measured 60 cm (23.6 in) by 43 cm (16.9 in), and the airbag had two vents and was not tethered.

There was no visible damage to the sensors, wiring or control module for the supplement restraint system.

Restraint System:

Vehicle 1 was equipped with manual lap/shoulder restraints at the LF, RF, and LR, RR seat positions. The second center seat position was equipped with a lap belt.

According to the owner's manual, the lap/shoulder belts are equipped with dual locking mode belt retractors. In the vehicle sensitive (emergency) locking mode, the retractor will allow the occupant freedom of movement, locking tight only on hard braking, hard cornering, or impacts of approximately 8 km/h (5 mph) or more. In the automatic locking mode the retractor will remain locked and does not allow the occupant freedom of movement. This mode must be used when installing a child seat. To switch the retractor from the emergency locking mode to the automatic locking mode the lap/shoulder belt is buckled and the stored belt is pulled all the way out until a click is heard. The belt is then allowed to retract, a clicking sound is heard as the belt retracts. The owner's manual further states to follow the instructions and warnings provided by the child seat manufacturer's concerning its installation and use. The child seat manufacturer recommends the use of a locking clip with this type of seat belt (i.e., the latch plate slides freely along the belt webbing).

It is the opinion of the investigator that the belt retractor of the right front passenger lap/shoulder belt was in the vehicle sensitive (emergency) locking mode.

The right front occupant, a 3-month-old child, was seated in a supine position in a Gerry Guard with glide infant car seat model . The child seat is a two piece seat, the top part being the seat and the bottom being a base which can be converted to a glide, i.e. a rocker. The top part of the seat appears to have been properly attached and locked to the child seat base. The child seat was in a rearward facing position with the manual lap/shoulder belt fastened on the seat belt hooks of the child seat but no

locking clip was used. One of the carrying handles was in the carrying position rather than behind the seat as recommended when lap/shoulder restraints are used. The shoulder harness appears to have been used according to statements made by the driver of Vehicle 1 to police, and statements made by the tow truck operator.

**Occupant
Kinematics:**

Driver, Vehicle 1 - The driver was seated in a bucket seat in a normal, upright seat position. At impact, it appears that the driver had her right foot on the brake pedal and her left foot on the floor. She was properly restrained by the available 3-point manual lap/shoulder restraints. During the on-site inspection, it appeared that the left front seat had been manually adjusted to a point of one notch forward from the rear-most track position. The adjustable seat back rest appeared to have been in a normal upright configuration.

At impact, the driver was projected forward, her torso loaded the lap/shoulder restraints and she probably came into contact with the deploying air bag and contacted the dashboard under the steering column with one of her legs. The driver did not claim any injuries, several witnesses stated that she was hysterical from the injuries sustained by her child.

RF Occupant, Vehicle 1 - This occupant was lying supine in a rearward facing child safety seat. The lap and shoulder belt was looped through the child seat belt hook, but no locking clip was used. As Vehicle 1 decelerated during pre-impact braking, the child seat likely tilted forward and moved forward striking the right dashboard area. There are grayish paint transfers from the child seat in several areas on the right side of the dashboard (see Figure 1). This placed the top rear area of the child seat over the air bag module cover.

On impact with Vehicle 2, the air bag module cover struck the top rear of the child seat and it shattered into many pieces (see Figure 2 and Photo # 047). At the same time, the air bag began its unfolding process, and contacted the rear area of the child seat causing rearward acceleration into the back head area of the child. The combined forces of the module cover striking the top rear of the child seat and the rearward acceleration by the deploying air bag, caused serious trauma to the child's head.

Driver, Vehicle 2 - It appears that this occupant was seated in an upright normal seat position with both hands on the steering wheel, with his right foot on the accelerator and his left foot on the floor. He was properly restrained by the automatic 3-point lap/shoulder restraints. At impact, the driver slid sideways towards the left door panel and slightly forward. His torso loaded the lap/shoulder restraints causing hematomas to his lower abdomen region, and his right groin possibly contacted the steering wheel.

The intruding left door contacted his left pelvis area causing fractures. The intruding sill contacted his left ankle and fractured it.

- Scene Clearance:** Both vehicle were towed from the scene due to damage. Vehicle 1 was totaled by the insurance company and placed in an outdoor area for auction. Vehicle 2 was taken to the tow facility's outdoor storage area.
- Safety Standards:** There were no violations of Federal Motor Vehicle Safety Standards and Regulations found during the inspection of Vehicles 1 and 2.

DRIVER AND OTHER OCCUPANTS:**VEHICLE 1**

	DRIVER	OCCUPANT 2 / CASE OCCUPANT
Age/Sex:	33/Female	3 months/Female
Seated Position:	Left front	Right front
Seat Type:	Bucket	Bucket
Height (Estimated):	Unknown	63.1 cm (24.8 in.) ¹
Weight (Estimated):	61 kg (135 lbs.) ²	6.9 kg (15.2 lbs.) ¹
Additional Measurements:		
Crown Rump Length:	NA	42.3 cm (16.7 in.) ¹ , this placed the top of the child's head 6.5 cm (2.6 in.), below the top of the child seat. This is only an estimate.
Occupation:	Unknown	Not employed
Pre-existing Medical Condition:	Unknown	Unknown
Alcohol/Drug Involvement:	None	None
Driving Experience:	Unknown	NA
Body Posture:	Normal, upright	Supine in rear facing child seat
Hand Position:	Unknown	NA
Foot Position:	Right foot on brake	NA
Restraint Usage:	Lap/shoulder belt used	Lap and shoulder used in conjunction with child safety seat. Locking clip not used.
Additional Occupants:	None	None

¹*Anthropometry of Infants and Youths to age 18 for Product Safety Design, SAE SP-450*

²*Nass 1995 Crashworthiness Data System*

DRIVER AND OTHER OCCUPANTS (cont.):**VEHICLE 2****DRIVER**

Age/Sex:	88/Male
Seated Position:	Left front
Seat Type:	Bucket with folding back
Height:	175 cm (69 in.)
Weight:	77 kg (170 lbs.)
Occupation:	Retired
Pre-existing Medical Condition:	Ischemic heart disease, multiple benign kidney cysts, benign prostatic hypertrophy
Alcohol Involvement:	None
Driving Experience:	Unknown
Body Posture:	Normal upright
Hand Position:	Unknown
Foot Position:	Right foot on accelerator
Restraint Usage:	Lap/shoulder belt used
Additional Occupants:	None

INJURIES:**Vehicle 1**

	<u>INJURY</u>	<u>OIC CODE</u>	<u>ICD-9</u>	<u>SOURCE/ Confidence³</u>
DRIVER:	No injuries reported			
R/F OCCUPANT: (Case Occupant)	Small subdural hematoma (below occipital fracture)	140652.4,6	852.20	Child seat back/1
	Skull fracture	150400.2,6	800.6	Child seat back/1
	Right occipital hematoma	190402.1,6	920.0	Unknown/9
	Abrasion to top of forehead	290202.1,5	910.0	Unknown/9
	Hematoma to forehead (NFS)	290402.1, 7	920.0	Unknown/9
	Abrasion under left eye	290202.1,2	910.0	Unknown/9

INJURIES:**Vehicle 2**

	<u>INJURY</u>	<u>OIC CODE</u>	<u>ICD-9</u>	<u>SOURCE/ Confidence³</u>
DRIVER:	Retroperitoneal hematoma	543800.3,8	868.04	Left side door panel/2
	Fracture of left pubis	852600.2,2	808.2	Left side door panel/2
	Fracture of left sacrum	852600.2,2	805.6	Left side door panel/2
	Fracture of left medial malleolus	853412.2,2	824.0	Sill/2
	Hematomas, horizontal clusters below the umbilicus, lower abdomen	590402.1,8	922.2	Seat belt/2

³1=Certain, 2=Probable, 3=Possible, 9=Unknown

<u>INJURY</u>	<u>OIC CODE</u>	<u>ICD-9</u>	<u>SOURCE/ Confidence⁴</u>
15 cm hematoma to right groin	890402.1,1	922.2	Steering wheel/3
12 x 8 cm contusion to left ankle	890402.1,2	924.21	Sill/2

⁴1=Certain, 2=Probable, 3=Possible, 9=Unknown

List of Abbreviations

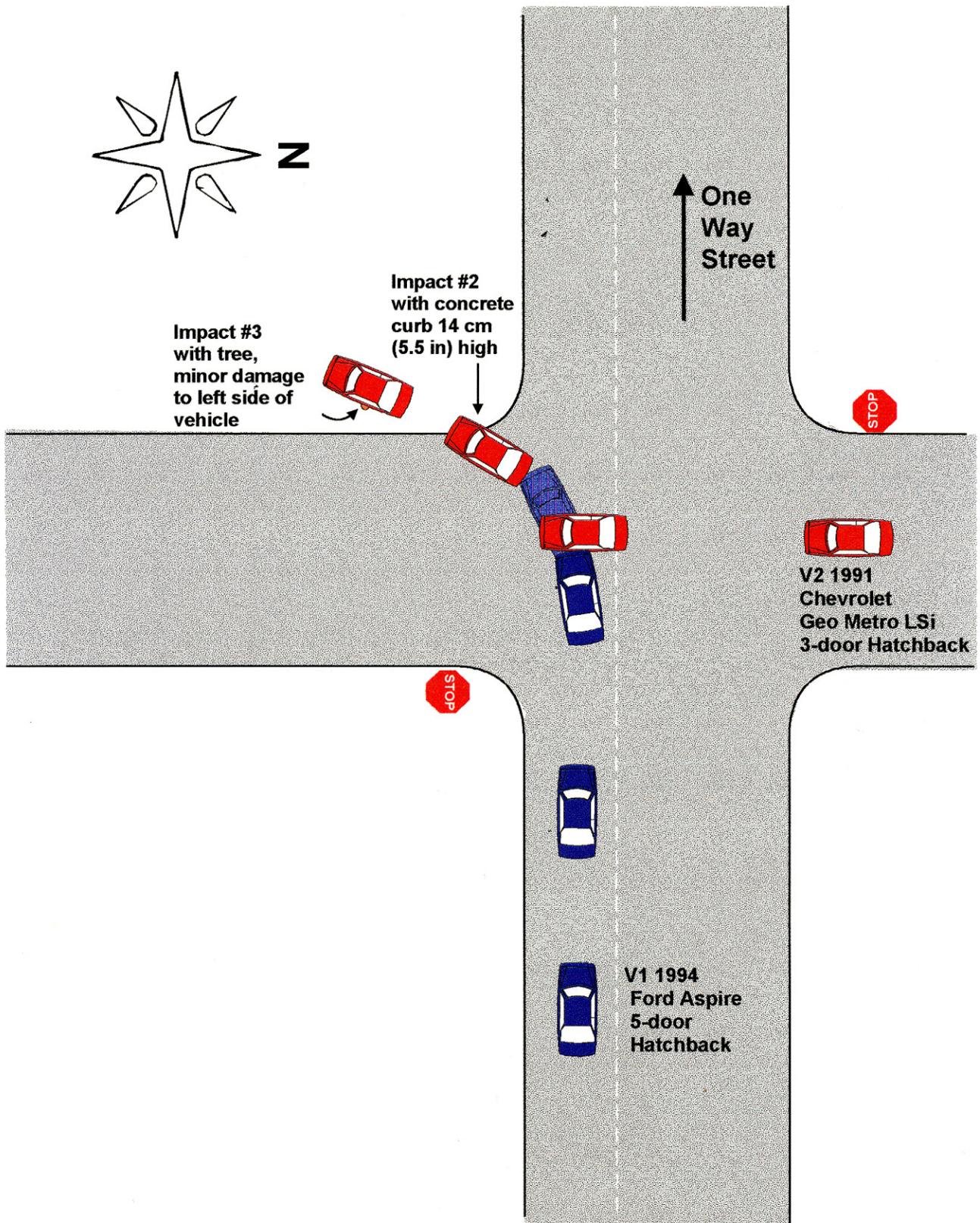
FT	Feet
IN	Inches
AME	After Market Equipment
AIS	Abbreviated Injury Scale
CCW	Counterclockwise
CDC	Collision Deformation Classification
C/F	Center Front
CG	Center of Gravity
CM	Centimeter
C/R	Center Rear
CW	Clockwise
E, EB	East, Eastbound
FRP	Final Rest Position
KG	Kilogram
KM/H	Kilometers per Hour
L/F	Left Front
L/R	Left Rear
M	Meter
N, NB	North, Northbound
NE	Northeast
NW	Northwest
OEM	Original Equipment Manufacturer
PDOF	Principal Direction of Force
POI	Point of Impact
R	Radius of Curvature
R/F	Right front
RL	Reference Line
RP	Reference Point
R/R	Right rear
S, SB	South, Southbound
SE	Southeast
SW	Southwest
V1	Vehicle 1
W, WB	West, Westbound

DSI-95-AB-25

Asphalt, dry, level surface

Speed limit : V1 48 km/h (30 MPH) / V2 40 km/h (25 MPH)

Scale 1" = 20' Diagram drawn to scale based on Police measurements



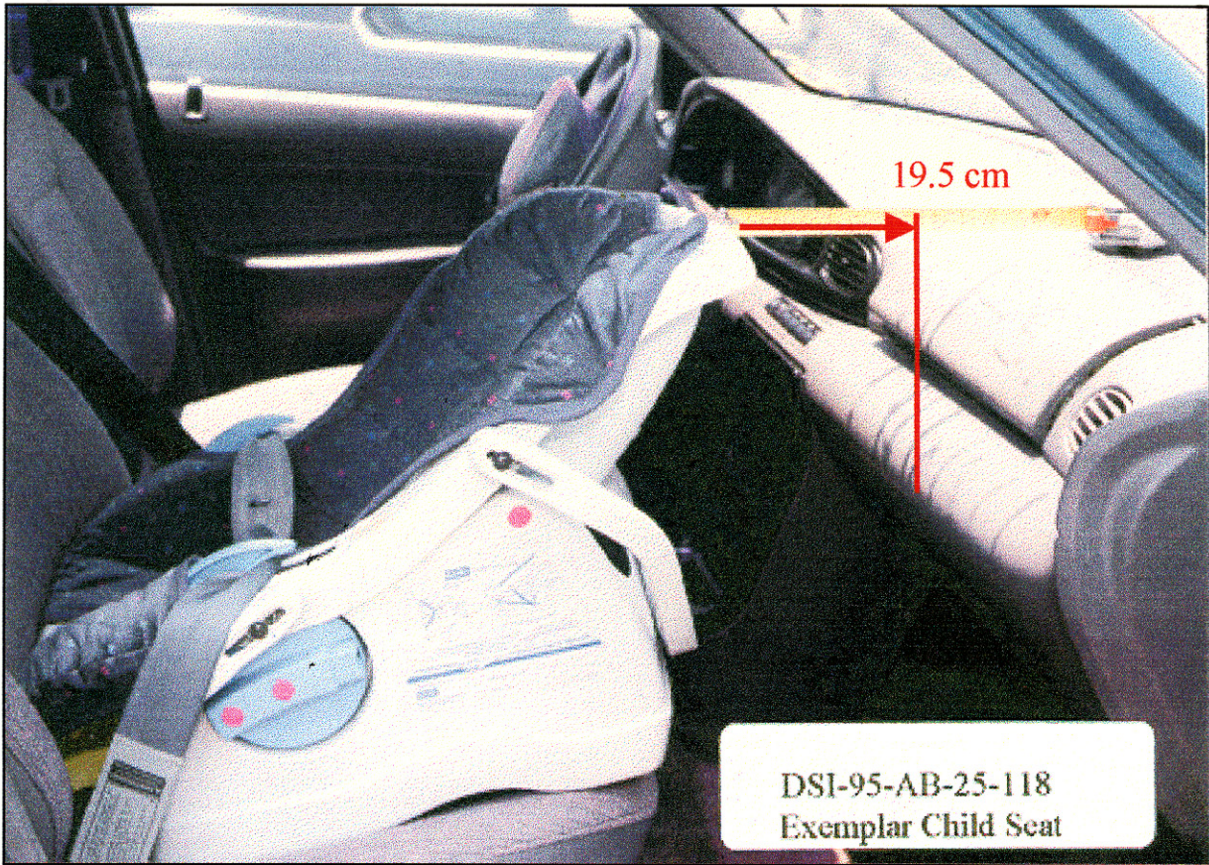


Figure 3. Exemplar child seat in exemplar vehicle, distance from top of child seat and module cover.

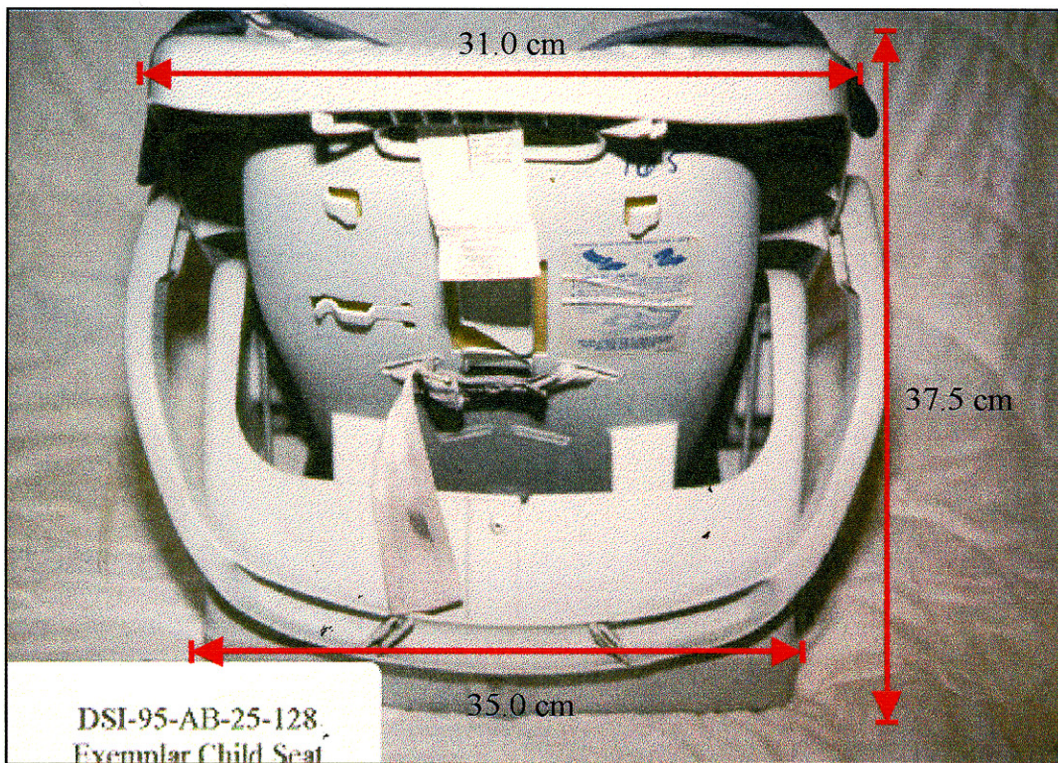


Figure 4. Exemplar child seat measurements.

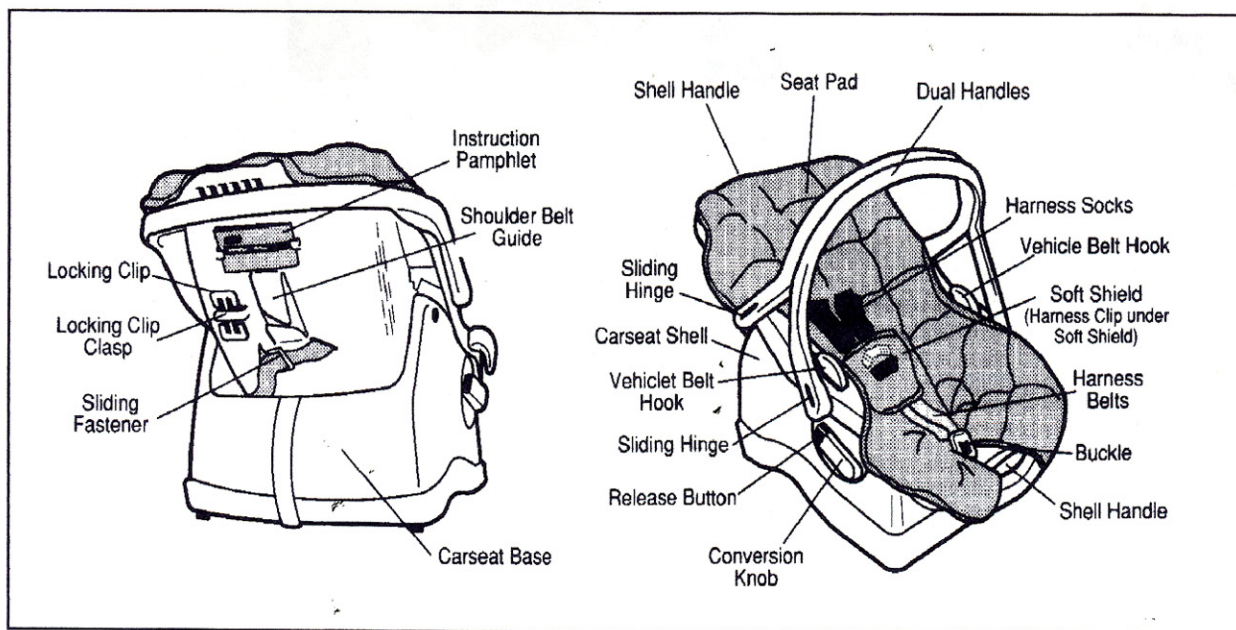


Figure 5. Description of child seat components.

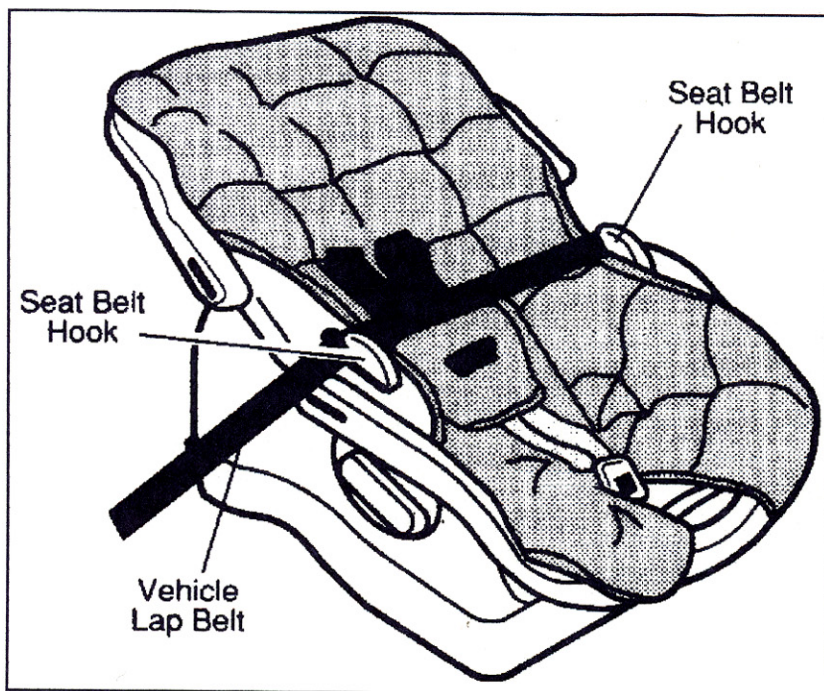


Figure 6. Attaching vehicle seat belt.

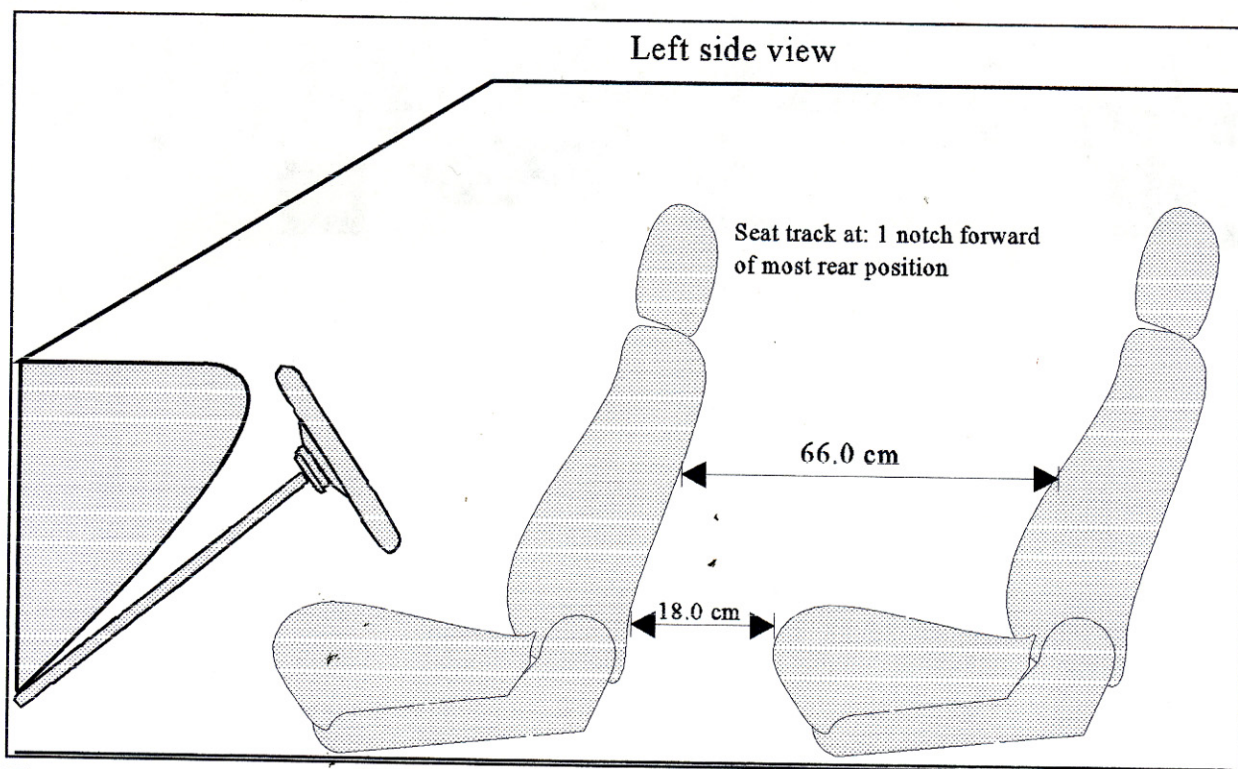


Figure 7. Measurements of distance between driver's seat and rear seat.

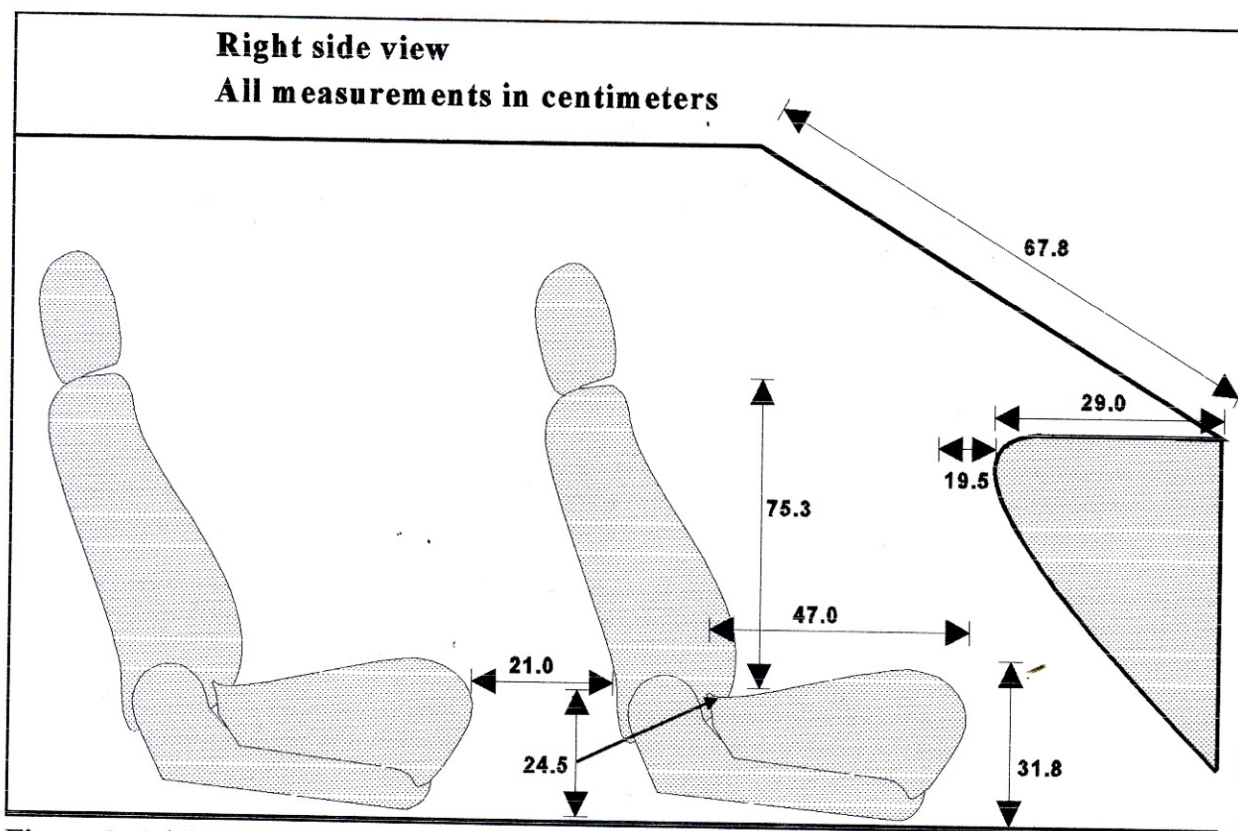


Figure 8. Additional measurements of right front and rear seats.

PHOTO INDEX

Case No. DSI-95-AB-25

PHOTO NO.	VEHICLE NO.	DIRECTION OF PICTURE	SUBJECT MATTER
001-002	1	West	Path of vehicle to area of impact.
003	1	West	Area of impact
004	1	North-West	Area of final rest.
005	1	East	Looking back from area of final rest.
006-007	2	South	Path of vehicle to area of impact #1.
008	2	South	Area of impact #1.
009-012	2	South	Area of impact #2 with curb, and final rest area along tree.
013	2	North	Looking back views along vehicle path.
014-029	1		Exterior of vehicle.
030-035	1		Driver's side of vehicle.
036-041	1		Driver's deployed air bag, yellow tape shows bluish tint.
042-044	1		Right front seat. Note shattered pieces of child seat.
045	1		Right front seat belt. Warning not to place rear facing child seat is written on belt.
046-047	1		Right front seat, track position with shattered pieces of child seat.
048-061	1		Right front air bag, module cover, and dashboard area. Yellow tape indicates areas of grayish paint transfer from child seat. Note photos #058-060 which has red arrows pointing to broken pieces of child seat.
062-073	1		Right front air bag. Note 065-066 impressions of contact probably with back of child seat.
075-076	1		Left windshield header, and sun visor.
077-079	1		Rear view mirror knocked off by the deploying air bag, and right side sun visor.
080-082	1		Rear seat, including photo #082 of left rear seat with a piece of shattered child seat.

083-099	2		Exterior damage to vehicle.
100	2		Left front seat.
101-108	2		Interior of vehicle.
			The following photos were taken by the police investigating the accident.
109-110	1	West	Direction of travel towards impact area. Note photo #110 skid marks made by vehicle 1. Not documented by police.
111-113	1	NA	Several views of final rest area of vehicle.
114	1		Child seat after child had been transported to hospital. Note no seat belt, top carrying handle is in the carrying position, the top of the child seat is completely shattered.
115-116	2		Several views of Vehicle 2 at final rest.
			The following photos were taken by the investigator of an exemplar vehicle with exemplar child seat.
117-125			Several views.
126-129			Exemplar child seat. Note photo #127 this proper placement of carrying arms when belted in vehicle.









DSI-95-AB-25-009



DSI-95-AB-25-010





DSI-95-AB-25-013



DSI-95-AB-25-014











DSI-95-AB-25-023

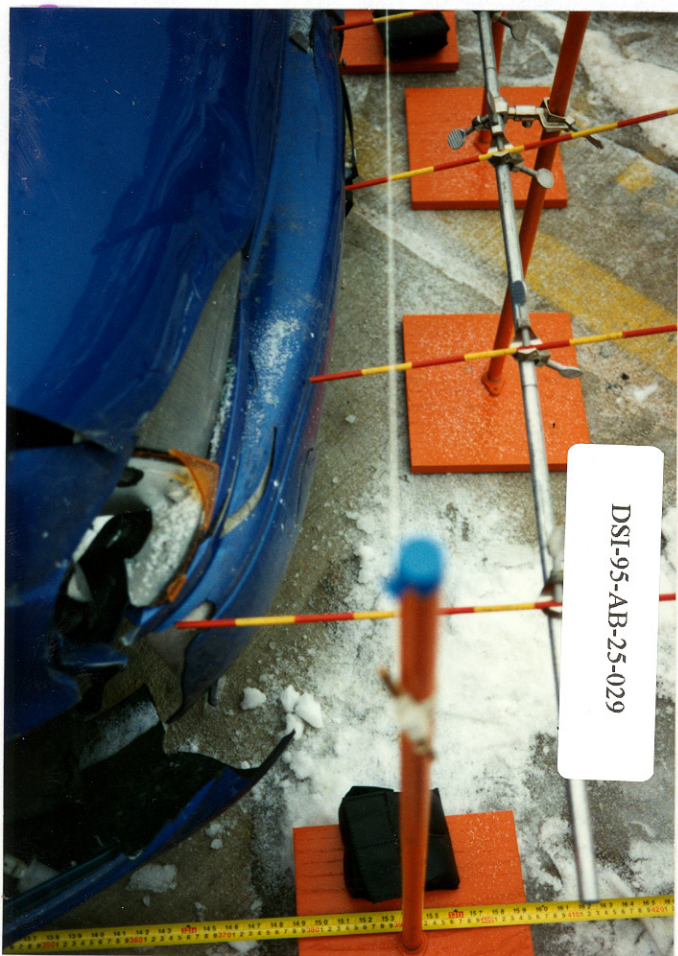


DSI-95-AB-25-024



















DSI-95-AB-25-039



DSI-95-AB-25-040





DSI-95-AB-25-043



DSI-95-AB-25-044

DSI-95-AB-25-045



DSI-95-AB-25-046

















DSI-95-AB-25-061



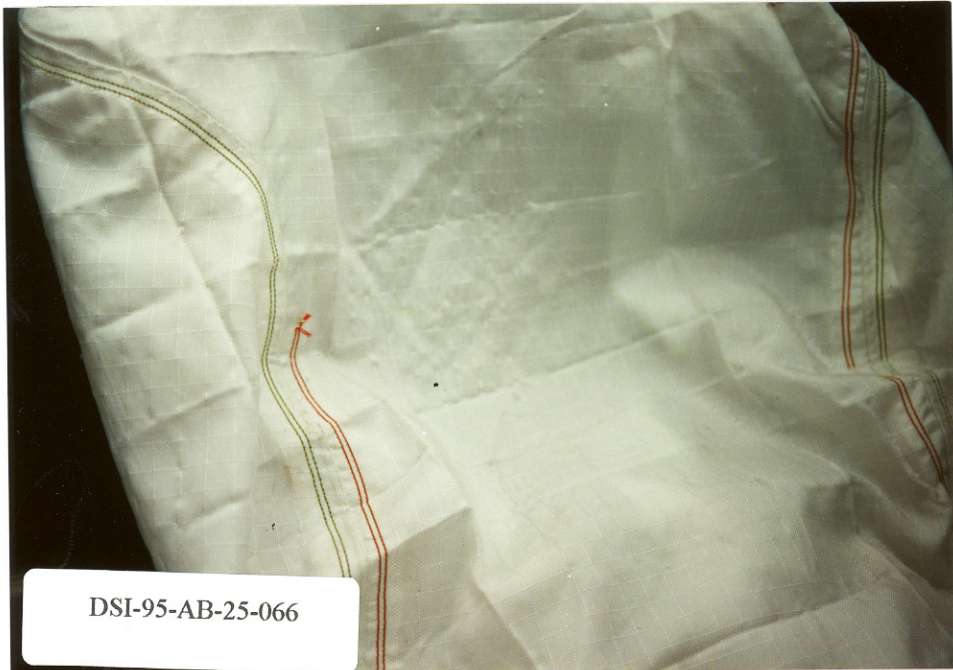
DSI-95-AB-25-062



DSI-95-AB-25-065



DSI-95-AB-25-066

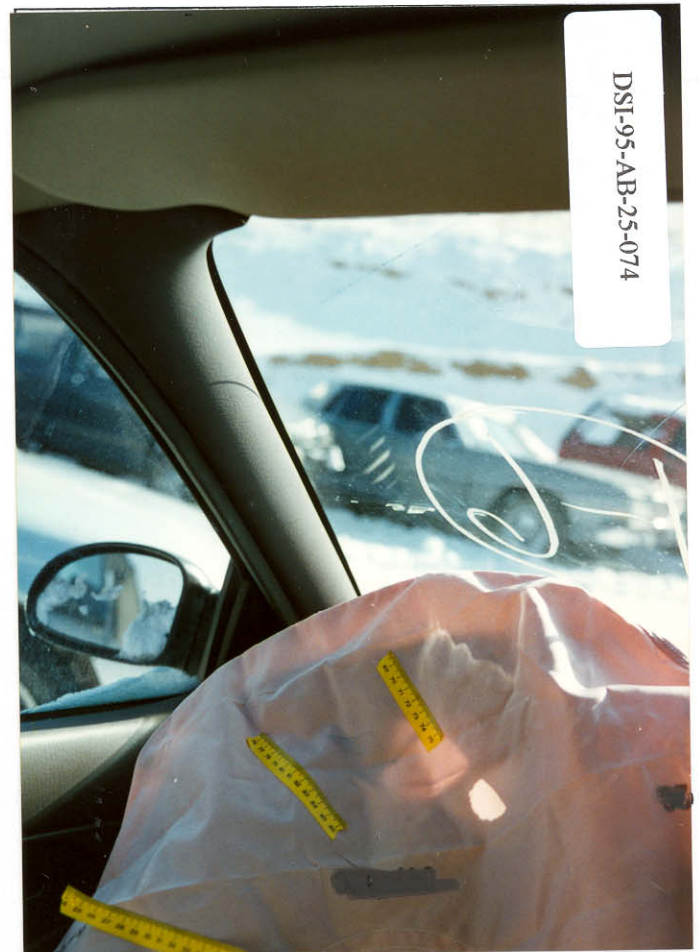








DSI-95-AB-25-073



DSI-95-AB-25-074



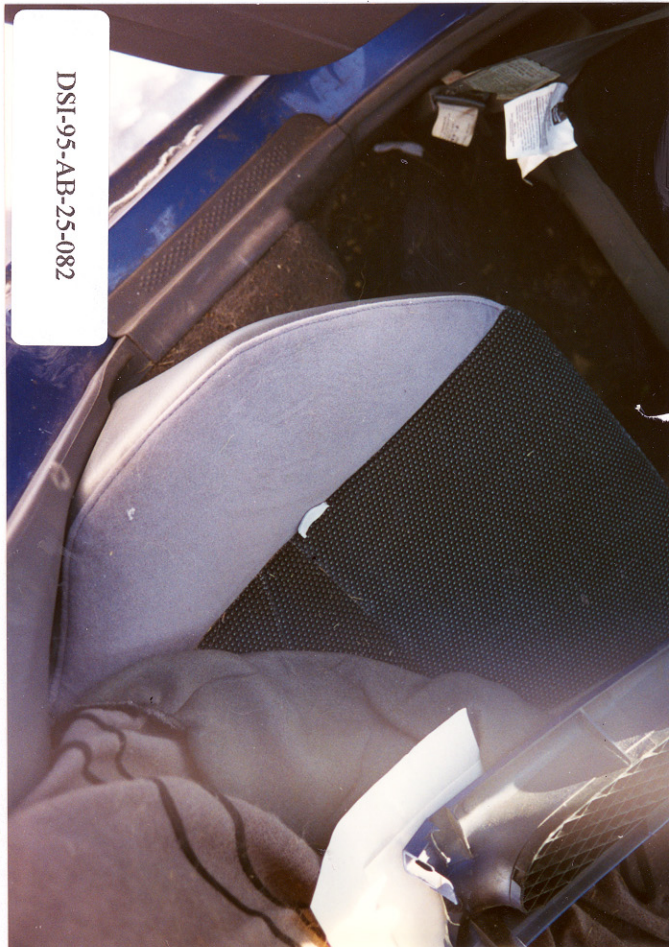




DSI-95-AB-25-081



DSI-95-AB-25-082



DSI-95-AB-25-083



DSI-95-AB-25-084



DSI-95-AB-25-085

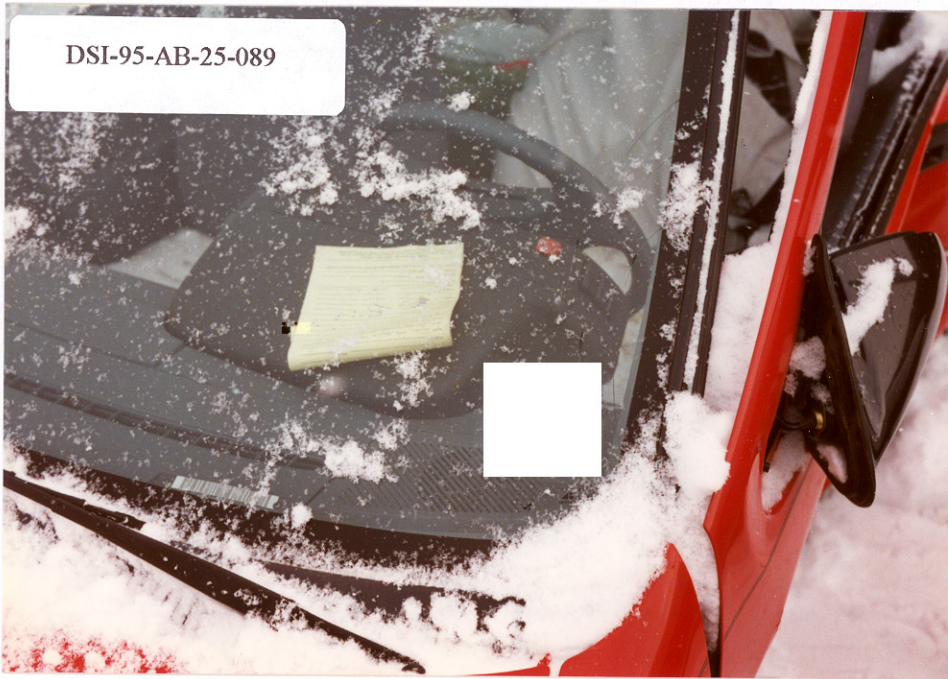


DSI-95-AB-25-086





DSI-95-AB-25-089



DSI-95-AB-25-090







DSI-95-AB-25-095



DSI-95-AB-25-096





DSI-95-AB-25-097



DSI-95-AB-25-098





DSI-95-AB-25-101



DSI-95-AB-25-102



DSI-95-AB-25-103



DSI-95-AB-25-104







DSI-95-AB-25-109
Police Photos



DSI-95-AB-25-110
Police Photos





DSI-95-AB-25-113
Police Photos



DSI-95-AB-25-114
Police Photos





DSI-95-AB-25-117
Exemplar Child Seat



DSI-95-AB-25-118
Exemplar Child Seat



DSI-95-AB-25-120
Exemplar Child Seat



DSI-95-AB-25-122
Exemplar Child Seat



DSI-95-AB-25-123
Exemplar Child Seat



DSI-95-AB-25-124
Exemplar Child Seat





DSI-95-AB-25-125
Exemplar Child Seat



DSI-95-AB-25-126
Exemplar Child Seat

DSI-95-AB-25-127
Exemplar Child Seat



DSI-95-AB-25-128
Exemplar Child Seat





Summary of Results Using Damage

DSI-95-AB-25

	Speed Change (Damage)	Speed Change (Linear Momentum and Spinout)	Impact Speed (Linear Momentum and Spinout)
Vehicle #1			
Total	15 km/h (9 mph)	16 km/h (10 mph)	35 km/h (22 mph)
Longitudinal	-14 km/h (-9 mph)	-14 km/h (-9 mph)	35 km/h (22 mph)
Latitudinal	-5 km/h (-3 mph)	-7 km/h (-5 mph)	0 km/h (0 mph)
PDOF Angle	20 °	28 °	
Energy Dissipated	= 16868 Joules (12440 Ft-Lb)		
Barrier Equivalent Speed	= 16.8 km/h (10.5 mph)		
Calculated using crush coefficients entered by the user.			

Vehicle #2			
Total	22 km/h (14 mph)	24 km/h (15 mph)	38 km/h (23 mph)
Longitudinal	-6 km/h (-4 mph)	-9 km/h (-6 mph)	38 km/h (23 mph)
Latitudinal	21 km/h (13 mph)	22 km/h (13 mph)	0 km/h (0 mph)
PDOF Angle	-75 °	-67 °	
Energy Dissipated	= 11331 Joules (8356 Ft-Lb)		
Barrier Equivalent Speed	= 19.0 km/h (11.8 mph)		
Calculated using crush coefficients entered by the user.			

Separation Results

	<u>Vehicle #1</u>	<u>Vehicle #2</u>
Separation (Using Spinout)		
us	21 km/h (13 mph)	28 km/h (18 mph)
vs	-7 km/h (-5 mph)	22 km/h (13 mph)
psisd	-31 deg/sec	55 deg/sec

Relative Velocity (Linear Momentum)

Speed along line through cg	35 km/h (21 mph)	4 km/h (2 mph)
Speed orthogonal to cg line	-7 km/h (-4 mph)	37 km/h (23 mph)

Closing Velocity (Linear Momentum) = 38 km/h (24 mph)

General Information

	Vehicle #1	Vehicle #2
Year	1994	1991
Make	Ford	Chevrolet
Model	Aspire	Geo Metro
CDC	01PDEW1	10LYEW2
Side Damaged	F	L
PDOF Angle	20 °	-75 °
Heading Angle	263 °	180 °

Calculation method: Vehicle's Crush Coeff. Vehicle's Crush Coeff.

d0 crush coeff.	91.47 sqrt(N)	63.29 sqrt(N)
d1 crush coeff.	6.80 sqrt(N)/cm	6.84 sqrt(N)/cm

Damage Information

	Vehicle #1	Vehicle #2
Vehicle Damage Known	Yes	Yes
Crush Length	136.0 cm (54 in)	220.0 cm (87 in)
C1	13.0 cm (5 in)	0.0 cm (0 in)
C2	7.0 cm (3 in)	7.0 cm (3 in)
C3	11.0 cm (4 in)	9.0 cm (4 in)
C4	7.0 cm (3 in)	0.0 cm (0 in)
C5	8.0 cm (3 in)	0.0 cm (0 in)
C6	17.0 cm (7 in)	0.0 cm (0 in)
D	0.0 cm (0 in)	12.0 cm (5 in)
D'	2.2 cm (1 in)	16.6 cm (7 in)

Scene Information

	<u>Vehicle #1</u>	<u>Vehicle #2</u>
Impact		
x position	2.3 m (7.5 ft)	2.6 m (8.5 ft)
y position	7.0 m (23.0 ft)	4.1 m (13.5 ft)
heading angle	265 °	180 °
Rest		
x position	1.2 m (3.9 ft)	-6.7 m (-22.0 ft)
y position	3.4 m (11.2 ft)	-2.0 m (-6.6 ft)
heading angle	246 °	203 °
Side-Slip Angle	0 °	0 °

Motion Information

	<u>Vehicle #1</u>	<u>Vehicle #2</u>
Did Vehicle Rotate?	Yes	Yes
Did Rotation Stop?	No	No
End of Rotation x position	1.2 m (3.9 ft)	-6.7 m (-22.0 ft)
End of Rotation y position	3.4 m (11.2 ft)	-2.0 m (-6.6 ft)
End of Rotation angle	246.0 °	203.0 °
Curved Path?	No	No
Curved Path x position	0.0 m (0.0 ft)	0.0 m (0.0 ft)
Curved Path y position	0.0 m (0.0 ft)	0.0 m (0.0 ft)
Direction of Rotation	CCW	CW
Amount of Rotation	< 360°	< 360°

Was There Sustained Contact Between the Vehicles? No

Friction Information

	Vehicle #1	Vehicle #2
Rolling Resistance		
Left Front Wheel	1.00	0.01
Right Front Wheel	1.00	0.01
Left Rear Wheel	1.00	0.01
Right Rear Wheel	1.00	0.01

Coefficient of Friction = 0.70

Vehicle Dimensions

	Vehicle #1	Vehicle #2
Length	396.0 cm (156 in)	371.1 cm (146 in)
Width	167.0 cm (66 in)	157.5 cm (62 in)
Wheelbase	238.5 cm (94 in)	226.6 cm (89 in)
Weight	1203 kgs (2652 lbs)	809 kgs (1784 lbs)
CG to Front of Veh	193.0 cm (76 in)	193.0 cm (76 in)
Engine Displacement	1.3 liters	1.0 liters
Moment of Inertia	170433 kgs (15085 lbs)	100599 kgs (8904 lbs)
Vehicle Mass	1203 kgs (6.9 lb-s ² /in)	809 kgs (4.6 lb-s ² /in)

Trajectory Simulation Results

Simulation Time: 198.000 seconds Integration Step = 0.050 seconds

	Vehicle #1	Vehicle #2
No. of Iterations	8	14
Best Iteration	8	8
Error	0.001	0.464
Predicted Rest Positions		
x	2.3 m (7.5 ft)	-8.6 m (-28.3 ft)
y	7.0 m (23.0 ft)	-3.6 m (-11.7 ft)
angle	265.0 °	198.6 °
Scene Rest Positions		
x	1.2 m (3.9 ft)	-6.7 m (-22.0 ft)
y	3.4 m (11.2 ft)	-2.0 m (-6.6 ft)
angle	246.0 °	203.0 °
Residual Velocity		
Linear	26 km/h (16 mph)	2 km/h (1 mph)
Angular	-35.21 deg/sec	-4.52 deg/sec



SMASH PROGRAM SUMMARY

(All Measurements in Metric)

NATIONAL ACCIDENT SAMPLING SYSTEM
CRASHWORTHINESS DATA SYSTEM

Identifying Title

Primary Sampling Unit: DSI-95-AB-25 Case No.-Stratum: 01 Accident Event Sequence No.: 1 Date (Month, day, year) of Run: 1/1/1

GENERAL INFORMATION

VEHICLE 1		VEHICLE 2	
NASS Vehicle Number	<u>01</u>	NASS Vehicle Number	<u>02</u>
Year	<u>1994</u>	Year	<u>1991</u>
Make	<u>FORD</u>	Make	<u>CHEVROLET</u>
Model	<u>Aspire</u>	Model	<u>GEO METRO LSi</u>
Body Style	<u>SH</u>	Body Style	<u>3H</u>
CDC	<u>01 FDEW1</u>	CDC	<u>10LPEW1</u>
PDOF	<u>0020</u>	PDOF	<u>0075</u>
Heading Angle	<u>± 263°</u>	Heading Angle	<u>± 130°</u>

VEHICLE SPECIFICATIONS

VEHICLE 1		VEHICLE 2	
Wheelbase	<u>239</u> cm	Wheelbase	<u>227</u> cm
Overall Length	<u>396</u> cm	Overall Length	<u>371</u> cm
Overall Width	<u>166</u> cm	Overall Width	<u>158</u> cm
Weight	<u>1135</u> + <u>76</u> + <u>0</u> = <u>1203</u> kg	Weight	<u>735</u> + <u>74</u> + <u>0</u> = <u>809</u> kg
Curb Occupant(s) Cargo		Curb Occupant(s) Cargo	
Engine Displacement	<u>1.3</u> L	Engine Displacement	<u>1.0</u> L
Drive System	<u>FWD</u>	Drive System	<u>FWD</u>
Size	<u>1</u>	Size	<u>1</u>
Stiffness	<u>1</u>	Stiffness	<u>1</u>

DAMAGE INFORMATION

VEHICLE 1		VEHICLE 2	
Damage known?	<u>0</u>	Damage known?	<u>1</u>
Damage Length	<u>136</u> cm	Damage Length	<u>220</u> cm
Damage Offset	<u>± 000</u> cm	Damage Offset	<u>0010</u> cm
Crush Depth:		Crush Depth:	
C1	<u>13</u> cm	C1	<u>0</u> cm
C2	<u>7</u> cm	C2	<u>7</u> cm
C3	<u>11</u> cm	C3	<u>9</u> cm
C4	<u>7</u> cm	C4	<u>0</u> cm
C5	<u>8</u> cm	C5	<u>0</u> cm
C6	<u>17</u> cm	C6	<u>0</u> cm

SCENE INFORMATION

Rest and Impact Positions ☐ No ☒ Yes

VEHICLE 1			VEHICLE 2		
Rest	X	1.2 m	Rest	X	-6.7 m
Position	Y	3.4 m	Position	Y	-2.0 m
	PSI	246°		PSI	203°
Impact	X	2.3 m	Impact	X	2.6 m
Position	Y	7.0 m	Position	Y	4.1 m
	PSI	265°		PSI	180°
Slip Angle (-180 to +180)		0°	Slip Angle (-180 to +180)		0°

VEHICLE MOTION

Sustained Contact ☒ No ☐ Yes

VEHICLE 1

 Vehicle Rotation ☐ No ☒ Yes
 Rotation Stop Before Rest ☒ No ☐ Yes

End of Rotation X 1.2 m

Position Y 3.4 m

PSI 246°

Curved Path ☒ No ☐ Yes

Point on Path

X m Y m

Rotation Direction ☐ None ☐ CW ☒ CCWRotation > 360° ☒ No ☐ YesSustained Contact ☒ No ☐ Yes

VEHICLE 2

 Vehicle Rotation ☐ No ☒ Yes
 Rotation Stop Before Rest ☒ No ☐ Yes

End of Rotation X -6.7 m

Position Y -2.0 m

PSI 203°

Curved Path ☒ No ☐ Yes

Point on Path

X m Y m

Rotation Direction ☐ None ☒ CW ☐ CCWRotation > 360° ☒ No ☐ Yes

FRICTION INFORMATION

Coefficient of Friction
Rolling Resistance Option

0.70

Vehicle 1 Rolling Resistance

LF 1.00 RF 1.00

LR 1.00 RR 1.00

Vehicle 2 Rolling Resistance

LF 0.01 RF 0.01

LR 0.01 RR 0.01

IF THIS COMMON IMPACT WAS WITH A CDS VEHICLE NOT IN TRANSPORT, FILL IN THE INFORMATION BELOW.

Model Year: _____

Make: _____

Model: _____

VIN: _____

The Weight, CDC, Scene Data and Damage Information for this vehicle should be recorded above.

Complete and ATTACH the appropriate damage sketch and dimensions to the form.

FILE #
AUTOPSY #
DOCTOR:

NAME:
DATE:

XPIRED:
AM

PM

PATHOLOGIC DIAGNOSES:

- I. Complications of blunt force injuries sustained in motor vehicle accident.
- A. Fracture of left pubis
 - B. Retroperitoneal hematoma, 4 x 4 cm., left perinephric fat
 - C. Fractures of sacrum and left medial malleolus (by history)
- II. Ischemic heart disease
- A. Right coronary artery - 75% stenosis at ostium; left circumflex coronary artery - 100% stenosis, mid anterior wall; left anterior descending coronary artery - 30% stenosis
 - B. 600 gram heart with replacement type myocardial fibrosis
 - C. Bilateral pleural effusions
- III. Multiple benign kidney cysts with hemorrhage into kidney cyst
- IV. Benign prostatic hypertrophy

TOXICOLOGY:

Blood ethanol ----- Negative
Urine basic drug screen ----- Normal
Urine screen for opiates, cocaine
metabolite, benzodiazepines,
and barbiturates ----- Negative

Vitreous chemistries:

Sodium ----- 141 MMOL/L
Potassium ----- 8.2 MMOL/L
Chloride ----- 127 MMOL/L
Glucose ----- 27 mg/dl
Urea nitrogen ----- 51 mg/dl
Creatinine ----- 0.9 mg/dl

CORONER

FILE #
AUTOPSY #
DOCTOR:NAME: _____
DATE: _____

EXPIRED:

PM

OPINION:

Death is due to complications of ischemic heart disease, precipitated by blunt force injuries sustained in an automobile accident.

FILE #
AUTOPSY #
DOCTOR:

NAME:
DATE:

EXPIRED:
AM

PM

ventricular wall is 1 cm. and the right ventricular wall 3 mm. In the posterior wall of the left ventricle is a 1 x 1 cm. scar near the apex. The atrial and ventricular septa are intact. The mitral and tricuspid valves are 13 cm., the pulmonic valve 9 cm., and the aortic valve 8 cm. The aorta and its major branches arise normally and are widely patent, with a mild amount of atherosclerosis. The vena cava and its major tributaries return to the heart in the usual distribution and are free of thrombi.

RESPIRATORY SYSTEM:

The right and left lungs weigh 800 and 730 grams, respectively. The upper airway is clear of debris and foreign material; the mucosal surfaces are smooth and tan. The pleurae are adhered to the chest wall. There is anthracotic pigmentation and a 1 cm. scar in the right upper lobe. The pulmonary parenchyma is pink and exudes a moderate amount of frothy fluid; no focal lesions are noted. The pulmonary arteries are normally developed, patent, and without thrombus or embolus.

LIVER AND BILIARY SYSTEM:

The liver weighs 1450 grams. The hepatic capsule is smooth, glistening, and intact, covering red-brown parenchyma, with no focal lesions noted. The gallbladder is absent. The extrahepatic biliary tree is patent and without masses, although the common bile duct appears dilated.

ALIMENTARY TRACT:

The esophagus is lined by gray-white, smooth mucosa. The gastric mucosa is arranged in the usual rugal folds, and the lumen contains 10 cc. of digested brown material. Scattered adhesions are on the surfaces of the small and large bowel, with serosal hemorrhage noted on the right colon. The appendix is present. The pancreas has a normal gray-white, lobulated appearance, and the ducts are clear.

GENITOURINARY TRACT:

The right and left kidneys weigh 220 and 270 grams, respectively. The right kidney has a 5 x 4 cm. cyst which is filled with 500 cc. of very bloody fluid. Both kidneys have multiple cysts, some multilocular. All the cysts are filled with clear yellow fluid except for the previously mentioned hemorrhagic cyst. There does not appear to be any significant loss of parenchyma. The cortical surface between the cysts is granular. The calyces, pelves, and ureters are unremarkable. The urinary bladder contains 5 cc. of clouded yellow fluid. The mucosal surface is hemorrhagic and trabeculated. There is a 4 x 4 cm. hemorrhage in the left perinephric fat without obvious vessel penetration.

The testes and seminal vesicles are unremarkable. The prostate has a hollowed area in the periurethral portion consistent with

FILE #
AUTOPSY #
DOCTOR:

NAME:
DATE:

FIRED:
AM

PM

prior transurethral resection. The remainder is mildly enlarged with rubbery yellow nodularity.

RETICULOENDOTHELIAL SYSTEM:

The spleen weighs 240 grams and has a smooth intact capsule covering a red-purple, moderately firm parenchyma. The hilar lymph nodes are anthracotic with some lymph nodes showing calcification and old granulomata.

ENDOCRINE SYSTEM:

The pituitary, thyroid, and adrenal glands are unremarkable.

MUSCULOSKELETAL SYSTEM:

The ribs are intact. There is hemorrhage below the psoas muscle over the sacroiliac joints bilaterally. The sacroiliac joints are grossly stable. There is bony irregularity and splintering to palpation in the left pubic bone but the pelvis is grossly stable.

CENTRAL NERVOUS SYSTEM:

The brain weighs 1180 grams. The dura mater and falx cerebri are intact. The leptomeninges are thin and delicate. The cerebral hemispheres are symmetrical. The blood vessels are mildly atherosclerotic. Sections through the cerebral hemispheres reveal mild atrophy mostly in the parietal region but no lesions within the cortex, subcortical white matter, or deep parenchyma of either hemisphere. The basal ganglia, thalami, and Ammon's horn are unremarkable. The cerebral ventricles are of normal caliber. Sections through the brain stem and cerebellum are unremarkable.

NECK:

Examination of the soft tissues of the neck, including strap muscles, thyroid gland, and large vessels, reveals no abnormalities. The hyoid bone and larynx are intact. The tongue is normal externally and on cut section.

SPECIMENS:

Specimens collected for toxicology include blood, urine, vitreous and gastric contents.

MICROSCOPIC EXAMINATION:

LUNGS:

There is dilatation and atelectasis with patchy edema and macrophages in the alveoli.

PROSTATE:

Glandular and stromal hyperplasia.

FILE #
AUTOPSY #
DOCTOR:

NAME:
DATE:

EXPIRED:
AM

PM

HEART:

Sections show patchy fibrosis which replace myocytes. In these areas there is chronic inflammation and hemosiderin pigmentation. The surrounding myocytes are hyperchromatic and enlarged.

KIDNEYS:

The majority of the glomeruli, tubules and vessels are without diagnostic abnormality. There is one area of fibrosed scar. Some of the tubules are dilated by pink amorphous material. The cyst are lined by atrophic flattened epithelium with fibrotic tissue walls with ("thyroidization").

CORONARY ARTERIES:

The coronary arteries show significant stenosis by atherosclerotic plaque with approximately 90% stenosis in one coronary artery, 75% in another, and 50% in the third. One coronary artery shows plaque in the vessel lumen and another shows what appears to be dislodged plaque with hemorrhage.

THYROID:

There is a calcified sclerotic nodule and one enlarged follicle filled with colloid.

LIVER:

No significant microscopic abnormalities.

BRAIN:

The hippocampus, cerebellum and cortex are without diagnostic abnormality.

BEST AVAILABLE

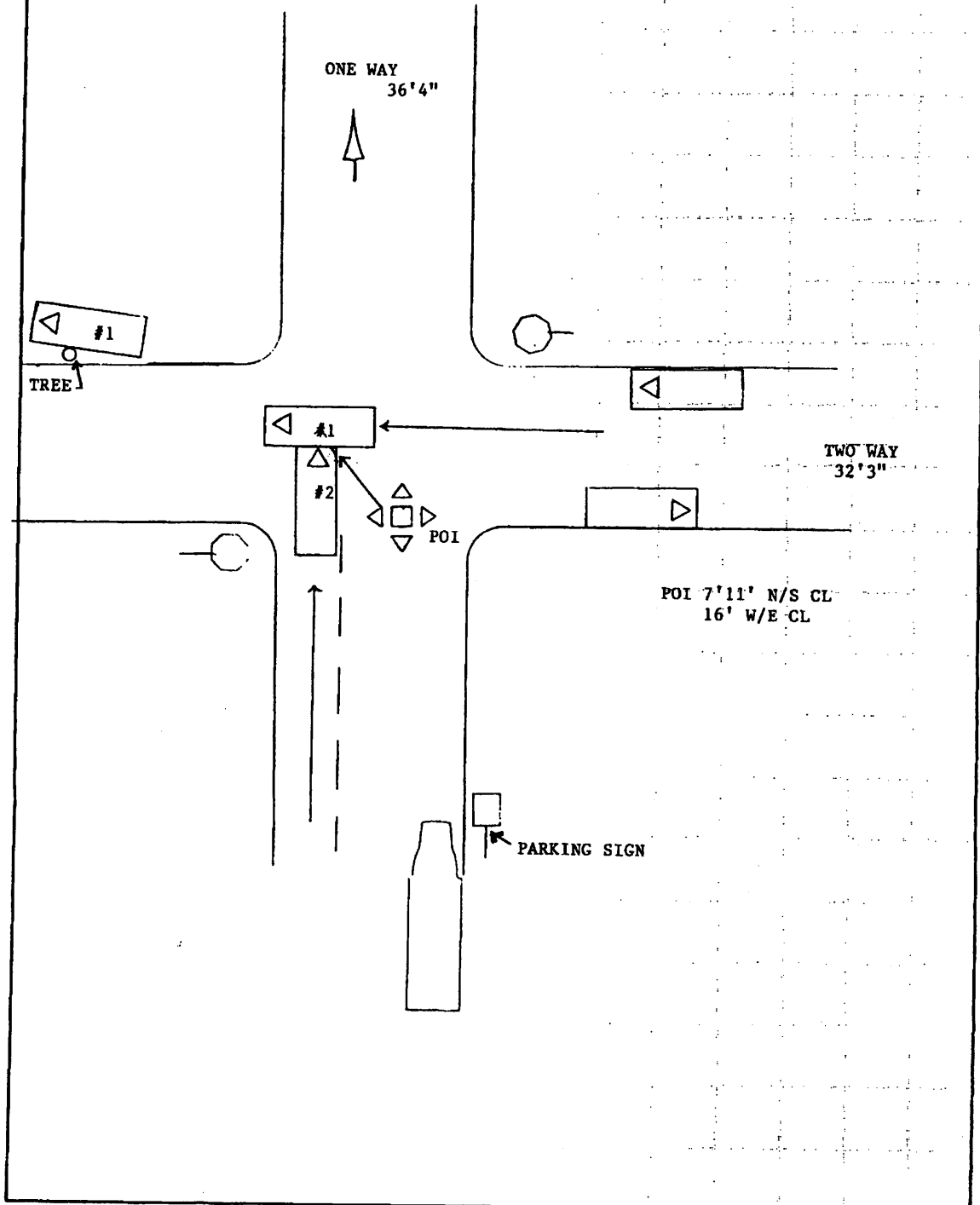
[illegible]

AND

0648 HOURS

NOT DRAWN TO SCALE

CLEAR/DRY/DAYLIGHT
ASPHALT



ACCIDENT CLASSIFICATION

VEHICLE CLASSIFICATION

A. BY LOCATION

- 1 ON ROADWAY ACCIDENT
- 2 RAN OFF LEFT SIDE
- 3 RAN OFF RIGHT SIDE
- 4 RAN OFF "T" INTERSECTION

B. BY FIRST HARMFUL EVENT

- | | |
|--|---|
| <p>NON-COLLISION ACCIDENT</p> <ol style="list-style-type: none"> 1 OVERTURNING ACCIDENT 2 OTHER NON-COLLISION ACCIDENT <p>COLLISION ACCIDENT INVOLVING PEDESTRIAN</p> <ol style="list-style-type: none"> 3 SCHOOL AGE TO/FROM SCHOOL 4 ALL OTHERS <p>INVOLVING MTR VEH IN TRANSPORT</p> <ol style="list-style-type: none"> 5 BROADSIDE 6 HEAD-ON 7 REAR-END 8 SIDESWIPE-SAME DIRECTION 9 SIDESWIPE-OPPOSITE DIRECTION 10 APPROACH TURN 11 OVERTAKING TURN 12 PARKED MOTOR VEHICLE 13 RAILWAY VEHICLE 14 BICYCLE 15 MOTORIZED BICYCLE <p>INVOLVING ANIMAL</p> <ol style="list-style-type: none"> 16 DOMESTIC 17 WILD | <p>COLLISION ACCIDENT INVOLVING FIXED OBJECT</p> <ol style="list-style-type: none"> 18 LIGHT POLE/UTILITY POLE 19 TRAFFIC SIGNAL POLE 20 SIGN 21 BRIDGE RAIL 22 GUARD RAIL 23 MEDIAN BARRIER 24 BRIDGE ABUTMENT 25 COLUMN OR PIER 26 CULVERT OR HEADWALL 27 EMBANKMENT 28 CURB 29 DELINEATOR POST 30 FENCE 31 TREE 32 LARGE BOULDER 33 ROCKS IN ROADWAY 34 BARRICADE 35 WALL/BUILDING 36 CRASH CUSHION 37 MAILBOX 38 OTHER FIXED OBJECT 39 INVOLVING OTHER OBJECT 40 ROAD MAINTENANCE EQUIP |
|--|---|

C. BY DAMAGE SEVERITY

- 1 DISABLING DAMAGE ACCIDENT
- 2 FUNCTIONAL DAMAGE ACCIDENT
- 3 OTHER MTR VEH DAMAGE ACCIDENT
- 4 OTHER PROPERTY DAMAGE ACCIDENT
- 5 NO DAMAGE ACCIDENT

D. BY ROAD DESCRIPTION AT ACCIDENT LOCATION

- | | |
|--|---|
| <ol style="list-style-type: none"> 1 AT INTERSECTION 2 AT DRIVEWAY ACCESS 3 INTERSECTION RELATED 4 IN MID-BLOCK (CITY) | <ol style="list-style-type: none"> 5 IN ALLEY 6 NON-INTERSECTION (RURAL) 7 HIGHWAY INTERCHANGE |
|--|---|

E. BY ROAD CONTOUR

- 1 STRAIGHT, ON-LEVEL
- 2 STRAIGHT, ON-GRADE
- 3 CURVE, ON-LEVEL
- 4 CURVE, ON-GRADE
- 5 HILLCREST

F. BY ROAD SURFACE

- | | |
|--|--|
| <ol style="list-style-type: none"> 1 CONCRETE 2 BLACKTOP (BITUMINOUS) 3 BRICK OR BLOCK 4 SLAG, GRAVEL OR STONE | <ol style="list-style-type: none"> 5 DIRT 6 OTHER 7 UNK |
|--|--|

G. BY ROAD CONDITION

- | | |
|--|---|
| <ol style="list-style-type: none"> 1 DRY 2 WET 3 MUDDY 4 SNOWY | <ol style="list-style-type: none"> 5 ICY 6 SLUSHY 7 FOREIGN MATERIAL 8 ICY ROAD TREATMENT |
|--|---|

H. BY LIGHTING CONDITION AT ACCIDENT LOCATION

- 1 DAYLIGHT
- 2 DAWN OR DUSK
- 3 DARK, LIGHTED
- 4 DARK, UNLIGHTED

J. BY ADVERSE WEATHER CONDITION

- | | |
|---|---|
| <ol style="list-style-type: none"> 1 NONE 2 RAIN 3 SNOW/SLEET/HAUL | <ol style="list-style-type: none"> 4 FOG 5 DUST 6 WIND |
|---|---|

K. BY VEHICLE TYPE

- | | |
|---|--|
| <ol style="list-style-type: none"> 1 PSGR CAR/PSGR VAN 2 PSGR CAR/PSGR VAN W/TLR 3 PICKUP TRUCK/UTILITY VAN 4 PICKUP TRUCK/UTILITY VAN W/TLR 5 TRUCK, SELF-CONTAINED (GR VEH WT 10,000 LBS OR LESS) 6 TRUCKS OVER 10,000 LBS AND BUSES OVER 15 PERSONS (Complete supplemental form DR447A-Appendix G) 7 MOTOR HOME 8 SCHOOL BUS LESS THAN 15 PEOPLE 9 NON-SCHOOL BUS LESS THAN 15 PEOPLE 10 MOTORCYCLE 11 BICYCLE 12 MOTORIZED BICYCLE 13 FARM EQUIPMENT | <ol style="list-style-type: none"> 14 HIT-AND-RUN/UNK VEH (Complete supplemental form DR447A-Appendix G) 15 OTHER (DESCRIBE VEH IN ACC REPORT NARRATIVE) |
|---|--|

L. BY DIRECTION OF TRAVEL

- 1 NORTH
- 2 NORTHEAST
- 3 EAST
- 4 SOUTHEAST
- 5 SOUTH
- 6 SOUTHWEST
- 7 WEST
- 8 NORTHWEST

M. BY VEHICLE MOVEMENT

- | | |
|---|---|
| <ol style="list-style-type: none"> 1 GOING STRAIGHT 2 SLOWING 3 STOPPED IN TRAFFIC 4 MAKING RIGHT TURN 5 MAKING LEFT TURN 6 MAKING U-TURN 7 PASSING 8 BACKING | <ol style="list-style-type: none"> 9 ENTER/LEAVING PARKED POSITION 10 STARTING IN TRAFFIC 11 PARKED 12 CHANGING LANES 13 AVOIDING OBJECT IN ROADWAY 14 WEAVING 15 OTHER (SPECIFY IN NARRATIVE) |
|---|---|

N. BY VEHICLE DEFECT

- | | |
|--|--|
| <ol style="list-style-type: none"> 1 NO APPARENT CONTRIBUTING FACTORS 2 BRAKES INOPERATIVE/OUT OF ADJUSTMENT 3 IMPROPER TIRES FOR CONDITIONS 4 SUDDEN TIRE FAILURE 5 WINDOWS OBSCURED 6 INOPERABLE SIGNALLING DEVICES 7 DEFECTIVE HEADLIGHT/S | <ol style="list-style-type: none"> 8 DEFECTIVE TAIL/BRAKE LIGHT/S 9 OTHER CONTRIBUTING FACTOR (SPECIFY IN NARRATIVE) |
|--|--|

P. BY FIRE/HAZARDOUS MATERIALS INVOLVEMENT

- 1 NO FIRE/NO HAZ-MAT CARGO
- 2 NO FIRE/HAZ-MAT CARGO NOT INVOLVED
- 3 NO FIRE/HAZ-MAT INCIDENT
- 4 VEHICLE FIRE/NO HAZ-MAT CARGO
- 5 VEHICLE FIRE/HAZ-MAT CARGO NOT INVOLVED
- 6 VEHICLE FIRE/HAZ-MAT INCIDENT

Q. BY SPEED DATA

SPEED LIMIT/EST DRIVING SPEED

DRIVER/PEDESTRIAN CLASSIFICATION

R. MOST APPARENT HUMAN CONTRIBUTING FACTOR (OFFICER OPINION ONLY)

- | | |
|--|--|
| <ol style="list-style-type: none"> 1 NO APPARENT CONTRIBUTING FACTOR 2 ASLEEP AT THE WHEEL 3 ILLNESS 4 DISTRACTED BY PASSENGER 5 DRIVER INEXPERIENCE 6 DRIVER FATIGUE 7 DRIVER PREOCCUPIED 8 DRIVER UNFAMILIAR WITH AREA 9 DRIVER EMOTIONALLY UPSET | <ol style="list-style-type: none"> 10 EVADING LAW ENFORCEMENT OFFICER 11 PHYSICAL DISABILITY |
|--|--|

S. BY PEDESTRIAN ACTION

- | | |
|--|--|
| <ol style="list-style-type: none"> 1 CROSS-AGAINST SIGNAL 2 CROSS/ENTER AT INTERSECTION 3 CROSS/ENTER NOT AT INTERSECTION 4 STANDING IN RDWY 5 PLAYING IN RDWY 6 SOLICITING RIDES 7 WALK IN RDWY WITH TRAFFIC 8 WALK IN RDWY AGAINST TRAFFIC | <ol style="list-style-type: none"> 9 ENTER/EXIT VEHICLE 10 PUSH/WORK ON VEHICLE 11 LYING IN RDWY 12 OTHER (SPECIFY IN NARRATIVE) |
|--|--|

T. BY CONDITION OF DRIVER/PEDESTRIAN (OFFICER OPINION ONLY)

- 1 NO IMPAIRMENT SUSPECTED
- 2 ALCOHOL INVOLVED
- 3 RX DRUGS OR MEDICATION INVOLVED
- 4 ILLEGAL DRUGS INVOLVED
- 5 ALCOHOL AND DRUGS INVOLVED
- 6 DRIVER/PEDESTRIAN NOT OBSERVED

U. BY CRASH HELMET (IF APPLICABLE)

- 1 DRIVER-YES/NO PSGR
- 2 DRIVER-YES/PSGR-YES
- 3 DRIVER-YES/PSGR-NO
- 4 DRIVER-NO/NO PSGR
- 5 DRIVER-NO/PSGR-YES
- 6 DRIVER-NO/PSGR-NO

V. BY EYE PROTECTION (IF APPLICABLE)

- 1 DRIVER-YES/NO PSGR
- 2 DRIVER-YES/PSGR-YES
- 3 DRIVER-YES/PSGR-NO
- 4 DRIVER-NO/NO PSGR
- 5 DRIVER-NO/PSGR-YES
- 6 DRIVER-NO/PSGR-NO

WHICH VEHICLE OCCUPIED

Vehicle #
Pedestrian #

B-Bicycle
O-Other

(2) POSITION IN/ON VEHICLE

- 1-Driver
- 2/7-Passengers
- 8-Riding/Hanging On Outside

(3) RESTRAINT USED

- 1-Yes
- 2-No
- 3-Child Restraint

(4) OCCUPANT EJECTED

- 1-Yes
- 2-No
- 3-Extricated

(5) INJURY SEVERITY

- | | |
|---|--|
| <ol style="list-style-type: none"> 1-No injury 2-Possible Injury 3-Evident, Non-Incapacitating | <ol style="list-style-type: none"> 4-Evident, Incapacitating 5-Fatal |
|---|--|

(6) PHYSICAL INJURY

- | | |
|---|---|
| <ol style="list-style-type: none"> 1-Head 2-Chest | <ol style="list-style-type: none"> 3-Abdomen 4-Skeletal |
|---|---|

(7) WITNESSED VICTIM STATUS

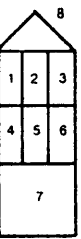
- 1-Conscious
- 2-Unconscious

(8) AMBULANCE TRIP REPORT

(9) AGE	(10) SEX
---------	----------

(11) NAME AND ADDRESS

BEST AVAILABLE



POLICE
DEPARTMENT

ACCIDENT
INVESTIGATIONS
BUREAU

INVESTIGATOR'S
FIELD
NOTES

INVESTIGATING DET. _____ DET. _____

- 1 -

BEST AVAILABLE

BEST AVAILABLE

SCENE NOTES

TYPE OF ACCIDENT _____ DATE _____

ACCIDENT LOCATION _____

NOTIFIED BY Radio AT 0700 TIME OF ARRIVAL 0710

FIRST OBSERVATIONS

WEATHER

TEMPERATURE 43° ECW OBTAINED Kosi

PRECIPITATION None VISIBILITY clear

OVERCAST 0 WINDS 0

LIGHTING

MERCURY VAPOR _____ SODIUM K _____

LOCATION OF LIGHTS daylight

OTHER LIGHTING IN AREA _____

BEST AVAILABLE

PERSONNEL AT SCENE

OFFICER _____ SER# _____ UNIT# _____ FUNCTION _____

assist measures

M.E. _____ ADAM- _____

REMOVAL SERVICE _____ TO _____

DENVER FIRE DEPT. INFORMATION

ENGINE Pumper 15 TRUCK _____ PUMPER _____

RESCUE UNIT _____ COMMANDED BY _____

B-shift

AMBULANCE / INJURED PERSON INFORMATION

COMPANY _____ AMBULANCE _____

ATTENDANT _____ DRIVER _____

TRANSPORTED _____ TO _____
NAME HOSPITAL

COMPANY _____ AMBULANCE _____

ATTENDANT _____ DRIVER _____

TRANSPORTED _____ TO _____
NAME HOSPITAL

COMPANY _____ AMBULANCE _____

ATTENDANT _____ DRIVER _____

ROAD CONDITION/DESCRIPTION

~~STREET~~/AVENUE _____SURFACE BlackTOPDRY ✓ WET _____ ICY _____ SNOWPACK _____

TRAFFIC CONTROL

TRAFFIC SIGNAL Ø STOP SIGN Ø NONE _____

LOCATION OF CONTROL _____

TRAFFIC LANES

NUMBER OF LANES 2 DIRECTION OF TRAVEL W.B.

LEFT TURN LANE _____ RIGHT TURN LANE _____ BUS LANE _____

LANE LINES

SOLID YELLOW •• WHITE DOTTED ✗ YELLOW DOTTED _____

HIGHWAY INFORMATION

HIGHWAY _____

WESTBOUND _____ EASTBOUND _____ SOUTHBOUND _____ NORTHBOUND _____

NUMBER OF LANES _____ MILE MARKER _____

ON RAMP _____ EXIT _____ BRIDGE/OVERPASS _____

CONCRETE MEDIAN CENTER _____ STEEL GUARDRAIL _____ OTHER _____

GRADE +/- _____

PARKING ALLOWED _____ PARKED VEHICLES PRESENT _____ DEBRIS _____

CONSTRUCTION _____ SPEED LIMIT SIGN _____ LOCATION _____

BEST AVAILABLE

ROAD CONDITION/DESCRIPTION

STREET/~~AVENUE~~_____

SURFACE Black TOP

DRY

☒

WET

ICY

SNOWPACK

TRAFFIC CONTROL

TRAFFIC SIGNAL _____ STOP SIGN ☒ NONE _____

LOCATION OF CONTROL _____

TRAFFIC LANES

NUMBER OF LANES

2

DIRECTION OF TRAVEL

N & S

LEFT TURN LANE

RIGHT TURN LANE

BUS LANE

LANE LINES

SOLID YELLOW

☒

WHITE DOTTED

NONE

YELLOW DOTTED

HIGHWAY INFORMATION

HIGHWAY _____

WESTBOUND

EASTBOUND

SOUTHBOUND

NORTHBOUND

NUMBER OF LANES

MILE MARKER

ON RAMP

EXIT

BRIDGE/OVERPASS

CONCRETE MEDIAN CENTER

STEEL GUARDRAIL

OTHER

GRADE +/-

PARKING ALLOWED

PARKED VEHICLES PRESENT

DEBRIS

CONSTRUCTION

SPEED LIMIT SIGN

LOCATION

MEASUREMENTS

TAKEN BY DETECTIVE/OFFICER _____

ASSISTING DETECTIVE/OFFICER _____

TYPE OF TAPE USED TAPE

POINT OF IMPACT _____

P.O.I. 7' 11" N of S - 16' W of E

P.O.I. (secondary) _____

POINT OF REST TRIANGULATED

7' 10" W of W RR 26' 4" S of S LF

 P.O.R./VEHICLE # 1 17' 8" S of S RR & 6' 1" W of W LF &

15' 2" W of E LR 4' 2" N of S RF

 P.O.R./VEHICLE # 2 4' 4" N of S LR & 5' 4" E of W RF &

P.O.R./VEHICLE # 3 _____ & _____ &

STREET/AVENUE MEASUREMENTS

~~STREET~~/AVENUE _____WIDTH 36' 4" DIRECTION OF TRAVEL westboundLANE #1 12' 8" LANE #2 23' 6" LANE #3 _____ LANE #4 _____ LANE #5 _____~~STREET~~/AVENUE _____WIDTH 32' 3" DIRECTION OF TRAVEL North & South

LANE #1 _____ LANE #2 _____ LANE #3 _____ LANE #4 _____ LANE #5 _____

HIGHWAY _____ DIRECTION OF TRAVEL _____

WIDTH _____ LANE #1 _____ LANE #2 _____ LANE #3 _____

LANE #4 _____ LANE #5 _____

DISTANCE TRAVELED AFTER IMPACT---VEH. 1 _____ VEH. 2 _____

BEST AVAILABLE

PHOTOGRAPES

T- 51

DETECTIVE _____

CAMERA 35MM X

B/W _____

COLOR X

FLASH _____

VIDEO USED _____

LIGHTING _____

PHOTOGRAPH DESCRIPTIONS

8 photos - scene - vehicles - child
seat

BEST AVAILABLE

VEHICLE INFORMATION

VEHICLE # 1

YEAR _____ MAKE Geo MODEL metro STYLE 2dr

LICENSE # _____ STATE _____ VIN: _____

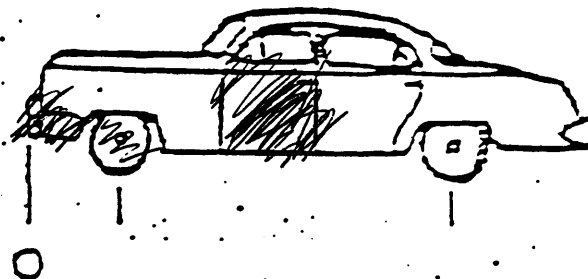
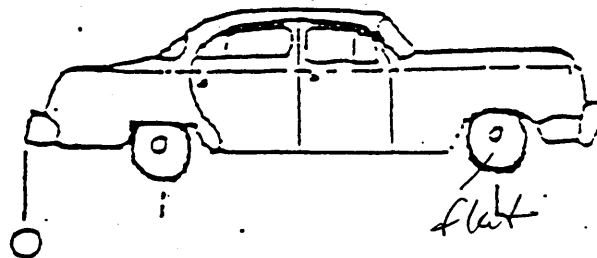
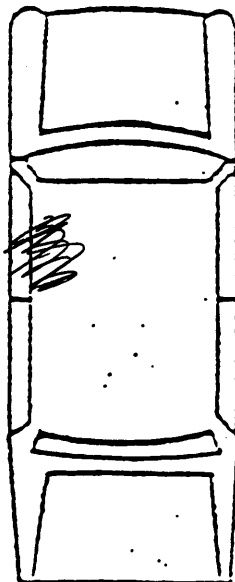
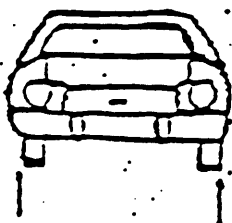
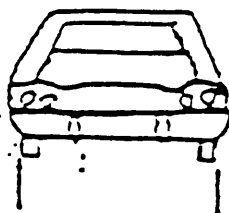
OWNER: _____ PHONE: _____

ADDRESS: _____ CITY: _____ STATE: _____

TOWED BY: _____ TO: _____

TOW DRIVER NAME: _____ TOW TRUCK #: _____

VEHICLE DAMAGE VEHICLE # 1



VEHICLE INSPECTION

VEHICLE # 1 :

BEST AVAILABLE

Damaged
Missing
Operable
Inoperable
Not Observed
N/A
Comments

Odometer						Reading	14248
Speedometer						Reading	0
Gear Lever						Position	PARK
Transmission						<input type="checkbox"/> Std. <input checked="" type="checkbox"/> Auto	
Light Switch						<input type="checkbox"/> On <input checked="" type="checkbox"/> Off <input type="checkbox"/> High <input type="checkbox"/> Low	
Radio						<input checked="" type="checkbox"/> On <input type="checkbox"/> Off	
Heater						<input checked="" type="checkbox"/> On <input type="checkbox"/> Off	
A/C						<input type="checkbox"/> On <input checked="" type="checkbox"/> Off	
Wipers						<input type="checkbox"/> On <input checked="" type="checkbox"/> Off	
Steering Wheel							
Steering Column							
Brakes							
Brake Pedal							
Windshield							
Hood							
Engine							
Battery							

TIRES

	PSI	MAKE	TYPE	RIM
LF				
RF				
LR				
RR				

Tread: ☐ Exc. ☐ Good ☐ Poor ☐ Bald

Uneven Wear: ☐ Inside ☐ Outside

WINDOW GLASS

	MISSING	BROKEN	INTACT
LF			
RF			
LR			
RR			

General Interior Condition

BEST AVAILABLE

VEHICLE INFORMATION

VEHICLE # 2

YEAR _____ MAKE _____ MODEL _____ STYLE _____

LICENSE # _____ STATE _____ VIN: _____

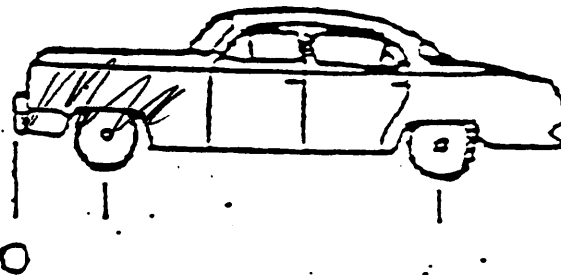
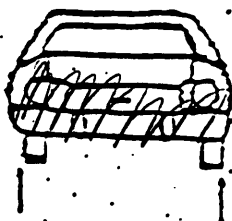
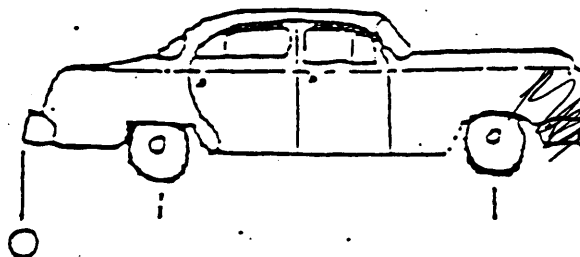
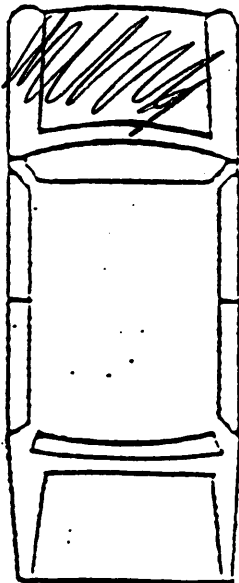
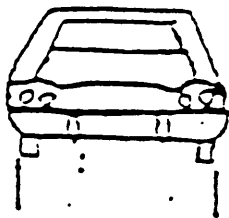
OWNER: _____ PHONE: _____

ADDRESS: _____ CITY: _____ STATE: _____

TOWED BY: _____ TO: _____

TOW DRIVER NAME: _____ TOW TRUCK #: _____

VEHICLE DAMAGE VEHICLE # 2



VEHICLE INSPECTION

VEHICLE # 2

BEST AVAILABLE

Damaged
Missing
Operable
Inoperable
Not Observed
N/A
Comments

Odometer			<input checked="" type="checkbox"/>			Reading	11847
Speedometer			<input checked="" type="checkbox"/>			Reading	
Gear Lever						Position	4 = 4th Gear
Transmission						<input checked="" type="checkbox"/> Std. <input type="checkbox"/> Auto	
Light Switch						<input type="checkbox"/> On <input type="checkbox"/> Off	<input type="checkbox"/> High <input type="checkbox"/> Low
Radio						<input type="checkbox"/> On <input type="checkbox"/> Off	
Heater						<input type="checkbox"/> On <input type="checkbox"/> Off	
A/C						<input type="checkbox"/> On <input type="checkbox"/> Off	
Wipers						<input type="checkbox"/> On <input type="checkbox"/> Off	
Steering Wheel							
Steering Column							
Brakes							
Brake Pedal							
Windshield			<input checked="" type="checkbox"/>				
Hood							
Engine							
Battery							

TIRES

	PSI	MAKE	TYPE	RIM
LF				
RF				
LR				
RR				

Tread: ☐ Exc. ☐ Good ☐ Poor ☐ Bald

Uneven Wear: ☐ Inside ☐ Outside

WINDOW GLASS

MISSING BROKEN INTACT

LF			
RF			
LR			
RR			

General Interior Condition

BEST AVAILABLE

VEHICLE INFORMATION

VEHICLE # 3

YEAR _____ MAKE _____ MODEL _____ STYLE _____

LICENSE # _____ STATE _____ VIN: _____

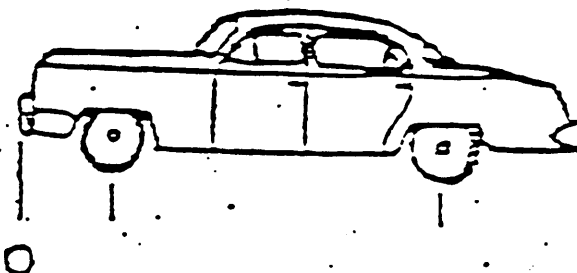
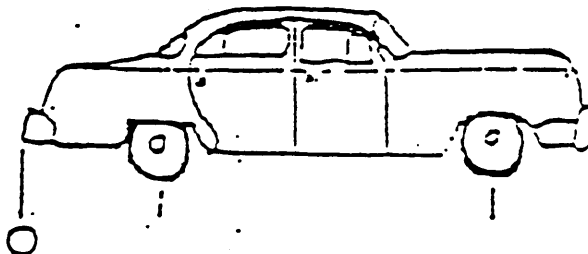
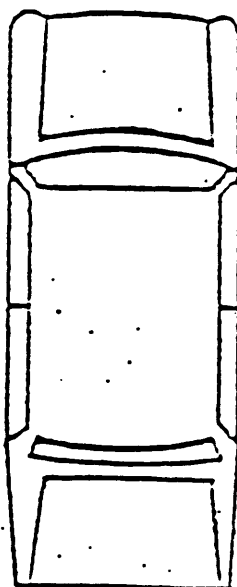
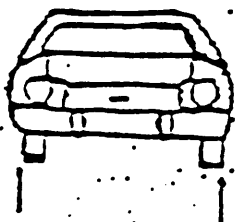
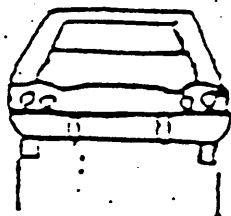
OWNER: _____ PHONE: _____

ADDRESS: _____ CITY: _____ STATE: _____

TOWED BY: _____ TO: _____

TOW DRIVER NAME: _____ TOW TRUCK #: _____

VEHICLE DAMAGE . VEHICLE # 3 .



VEHICLE INSPECTION

VEHICLE # 3

BEST AVAILABLE

Damaged
Missing
Operable
Inoperable
Not Observed
N/A
Comments

Odometer						Reading
Speedometer						Reading
Gear Lever						Position
Transmission						<input type="checkbox"/> Std. <input type="checkbox"/> Auto
Light Switch						<input type="checkbox"/> On <input type="checkbox"/> Off <input type="checkbox"/> High <input type="checkbox"/> Low
Radio						<input type="checkbox"/> On <input type="checkbox"/> Off
Heater						<input type="checkbox"/> On <input type="checkbox"/> Off
A/C						<input type="checkbox"/> On <input type="checkbox"/> Off
Wipers						<input type="checkbox"/> On <input type="checkbox"/> Off
Steering Wheel						
Steering Column						
Brakes						
Brake Pedal						
Windshield						
Hood						
Engine						
Battery						

TIRES

	PSI	MAKE	TYPE	RIM
LF				
RF				
LR				
RR				

Tread: ☐ Exc. ☐ Good ☐ Poor ☐ Bald

Uneven Wear: ☐ Inside ☐ Outside

WINDOW GLASS

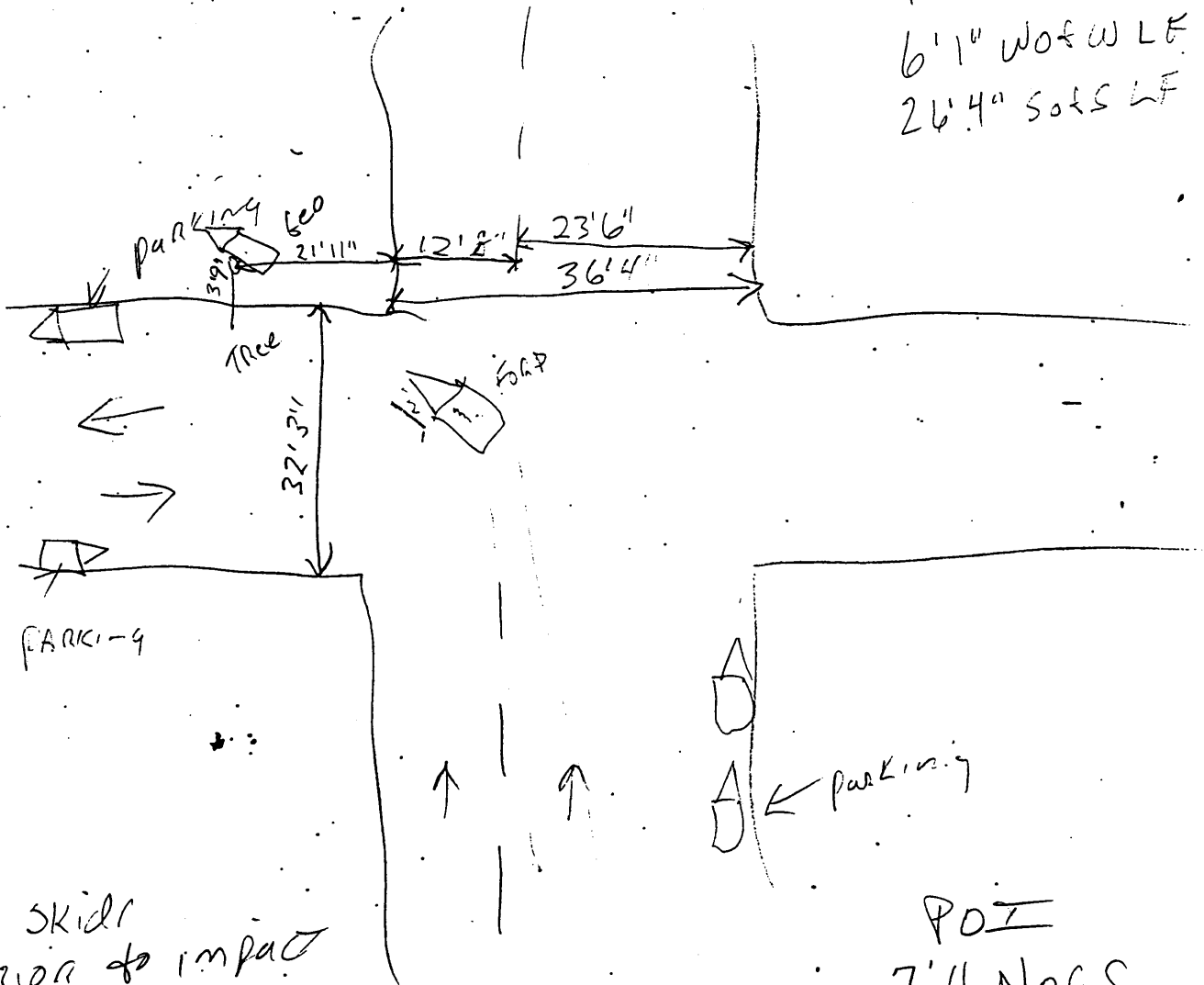
	MISSING	BROKEN	INTACT
LF			
RF			
LR			
RR			

General Interior Condition _____

ACCIDENT SCENE DIAGRAM

#1
POI 500

17'8" SoS R
7'10" WoS W R
6'1" WoS W LF
26'4" SoS LF



NO SKID
prior to impact

POI
7'11" NoS
16' WoS E

#2
POI (Forb)
4'4" NoS LR
15'2" WoS E LR
5'4" EoS W RF
4'2" NoS RF

DIAGRAM

BEST AVAILABLE

[illegible]

DRIVER IDENTIFICATION

VEHICLE #1

DRIVER'S NAME _____

ADDRESS _____

CITY _____

STATE _____

ZIP _____

DRIVER LICENSE # _____

STATE _____

HOW IDENTIFIED _____

DRIVER'S CONDITION-----ALCOHOL _____

DRUGS _____

ILLNESS _____

OTHER _____

EXPLAIN _____

VEHICLE # 2

DRIVER'S NAME _____

ADDRESS _____

CITY _____

STATE _____

ZIP _____

DRIVER LICENSE # _____

STATE _____

HOW IDENTIFIED _____

DRIVER'S CONDITION-----ALCOHOL _____

DRUGS _____

ILLNESS _____

OTHER _____

EXPLAIN _____

VEHICLE # 3

DRIVER'S NAME _____

ADDRESS _____

CITY _____

STATE _____

ZIP _____

DRIVER LICENSE # _____

STATE _____

HOW IDENTIFIED _____

DRIVER'S CONDITION-----ALCOHOL _____

DRUGS _____

ILLNESS _____

OTHER _____

EXPLAIN _____

WITNESS INFORMATION

NAME _____ DOB _____

ADDRESS _____

CITY, STATE, ZIP _____

HOME PHONE _____ BUSI. PHONE _____

WITNESS LOCATION AT ACCIDENT _____

STATED _____

NAME _____ DOB _____

ADDRESS _____

CITY, STATE, ZIP _____

HOME PHONE _____ BUSI. PHONE _____

WITNESS LOCATION AT ACCIDENT _____

STATED _____

NAME _____ DOB _____

ADDRESS _____

CITY, STATE, ZIP _____

WITNESS LOCATION AT ACCIDENT _____

STATED _____

WITNESS INFORMATION

NAME _____ DOB _____

ADDRESS _____

CITY, STATE, ZIP _____

HOME PHONE _____ BUSI. PHONE _____

WITNESS LOCATION AT ACCIDENT _____

STATED _____

NAME _____ DOB _____

ADDRESS _____

CITY, STATE, ZIP _____

HOME PHONE _____ BUSI. PHONE _____

WITNESS LOCATION AT ACCIDENT _____

STATED _____

NAME _____ DOB _____

ADDRESS _____

CITY, STATE, ZIP _____

WITNESS LOCATION AT ACCIDENT _____

STATED _____

HOSPITAL FOLLOW-UP

HOSPITAL _____ TIME _____

BLOOD ALCOHOL-----DRIVER #1 _____ DRIVER #2 _____ DRIVER #3 _____

FORCED _____ CONSENT _____

DRAWN BY _____ AT _____ AM _____ PM _____

FROM _____ HOLD PLACED _____
LOCATION OF BODY _____

WITNESSED BY _____

INJURED PARTY _____ DOB _____

ADDRESS _____

CONDITION/INJURIES _____

ATTENDING PHYSICIAN _____

INJURED PARTY _____ DOB _____

ADDRESS _____

CONDITION/INJURIES _____

ATTENDING PHYSICIAN _____

FATAL:

VICTIM'S NAME _____

CAUSE OF DEATH _____

IDENTIFICATION MADE BY _____

FINGERPRINTS TAKEN BY _____ AT _____

LOCATION OF BODY _____

HOSPITAL FOLLOW-UP (CONT.)

ADDITIONAL INJURED PARTIES

INJURED PARTY: _____ DOB _____

ADDRESS: _____

CONDITION/INJURIES: _____

ATTENDING PHYSICIAN: _____

INJURED PARTY: _____ DOB _____

ADDRESS: _____

CONDITION/INJURIES: _____

ATTENDING PHYSICIAN: _____

INJURED PARTY: _____ DOB _____

ADDRESS: _____

CONDITION/INJURIES: _____

ATTENDING PHYSICIAN: _____

INJURED PARTY: _____ DOB _____

ADDRESS: _____

CONDITION/INJURIES: _____

ATTENDING PHYSICIAN: _____

HOSPITAL FOLLOW-UP

HOSPITAL _____ TIME 0740

BLOOD ALCOHOL-----DRIVER #1 _____ DRIVER #2 _____ DRIVER #3 _____

FORCED _____ CONSENT _____

DRAWN BY _____ AT _____ AM _____ PM _____

FROM _____ HOLD PLACED _____
LOCATION OF BODY _____

WITNESSED BY _____

INJURED PARTY _____ DOB _____

ADDRESS _____

CONDITION/INJURIES SERIOUS head

ATTENDING PHYSICIAN _____

INJURED PARTY _____ DOB _____

ADDRESS _____

CONDITION/INJURIES _____

ATTENDING PHYSICIAN _____

FATAL:

VICTIM'S NAME _____

CAUSE OF DEATH _____

IDENTIFICATION MADE BY _____

FINGERPRINTS TAKEN BY _____ AT _____

LOCATION OF BODY _____

POLICE DEPARTMENT
TRAFFIC INVESTIGATION BUREAU
SUPPLEMENTARY REPORT

Case Number _ _ _ _ _

[] Additional

Last Name FIRST MIDDLE

Address Res. Phone

City State Zip Bus. Phone

Driver's License Number State Sex M DOB

Violations: STOP SIGN/NPI Age 88

Violation Code:

Citation #: Common Code:

Year: 91 Make: CHEV Model: GEO

License Number: State: Body Type: 2D Color: RED

Registered Owner Name: SAME

Address: City: State: Zip:

Location of Accident: AVE AND ST

Date of Accident: Date of Report: SAME

Subject: INCOMPLETE S/I

Case Status: CBA T Date:

Photo Number: 460 Fatal Number:

Insurance Company: NONE

Policy Number:

Expiration Date:

Vehicle Towed By/To:

Vehicle Identification No.:

Officer Serial No.

Detective Assigned Serial No.

Completed By Serial No.

Reviewing Officer Serial No.

 DATE, TIME &
 SERIAL NO.

0700 HRS

CASE ASSIGNED.

RECEIVED A PHONE CALL IN FROM THE RADIO ROOM REQUESTING A
 INVESTIGATOR TO RESPOND TO A SERIOUS INJURY ACCIDENT.

DET. AND DET RESPONDED TO THE
 SCENE.

0710 HRS

UPON ARRIVAL AT THE SCENE ALL INJURED PARTIES HAD BEEN REMOVED
 FROM THE SCENE BY AMBULANCE TO

A BLUE FORD ASPIRE 2DR. IS IN THE LEFT LANE OF AVE FACING
 SOUTHWEST. IT HAS HEAVY DAMAGE TO THE ENTIRE FRONT. A CHILD SEAT
 IS IN THE RIGHT FRONT SEAT FACING BACKWARDS WITH NO BELTS
 ATTACHED. THE WINDSHIELD IS BROKEN AND THE INSIDE REAR VIEW
 MIRROR IS NO LONGER ATTACHED. BOTH AIR BAGS HAVE BEEN DEPLOYED.
 THERE IS NO EVIDENCE (HAIR, FLESH, BLOOD) ON THE WINDSHIELD, THE
 MOULDING AROUND THE INTERIOR OF THE WINDSHIELD OR THE REAR VIEW
 MIRROR INDICATING AN IMPACT FROM A PERSON IN THE VEHICLE.

A RED CHEVY GEO 2D IS ON THE SIDEWALK AREA ON THE SOUTHWEST CORNER
 OF AND IT HAS HEAVY DAMAGE TO THE LEFT SIDE DOOR
 AND FENDERS FROM A BROADSIDE IMPACT.

TIRE MARKS ON THE ROADWAY INDICATE THE BLUE FORD WAS WESTBOUND
 IN THE LEFT LANE OF AVE AND THERE WERE NO BRAKES APPLIED
 PRIOR TO IMPACT. SIDE SCUFF TIRE MARKS FROM THE CHEVY INDICATE
 THE VEHICLE WAS STRUCK IN THE LEFT LANE OF AND PUSHED
 SIDWAYS. IT STRUCK THE SOUTH CURB OF AT THE SOUTHWEST
 CORNER CAUSING THE VEHICLE TO TURN SOUTHBOUND AGAIN AND CONTINUE
 OVER THE CURB AND STOP AFTER COMING TO REST AGAINST A TREE.

OFFICER STATED THAT THE DRIVER OF THE BLUE FORD IS A
 SHE TOLD HIM SHE WAS GOING ABOUT 25 MPH IN THE
 LEFT LANE WHEN SUDDENLY THE RED CAR PULLED OUT IN FRONT OF HER
 AND SHE WAS UNABLE TO STOP. HER CHILD WAS STILL STRAPPED IN THE
 CAR SEAT AFTER THE ACCIDENT.

THE DRIVER OF THE RED CHEVY IS A HE TOLD OFFICER
 THAT HE STOPPED FOR THE STOP SIGN. WHEN HE PULLED OUT AND
 SAW THE OTHER CAR SHE WAS GOING TO FAST FOR HIM TO GET OUT OF THE
 WAY.

BOTH VEHICLES WERE TOWED FROM THE SCENE BY PRIVATE TOWS. PHOTOS
 OF THE SCENE AND THE VEHICLES WERE TAKEN BY DET.
 MEASUREMENTS TAKEN BY DET. ASSISTED BY OFFICER

STATEMENTS FROM THE DRIVERS, DAMAGE TO THE VEHICLES, AND EVIDENCE
 AT THE SCENE REVEAL THE ACCIDENT OCCURRED IN THE FOLLOWING MANNER:

VEHICLE ONE A RED CHEVY GEO DRIVEN BY WAS
 TRAVELING SOUTH ON DETROIT ST, STARTING FROM A STOP WHEN IT WAS

STRUCK ON THE LEFT SIDE BY VEHICLE TWO A BLUE FORD ASPIRE DRIVEN BY TRAVELING WEST ON IN THE LEFT LANE OF A TWO LANE ONE WAY STREET AT A STATED SPEED OF 25 MPH. VEHICLE ONE TRAVELED 30 FEET TO REST AFTER IMPACT. VEHICLE TWO TRAVELED 6 FEET TO REST AFTER IMPACT.

THE ROADWAY IS LEVEL, ASPHALT CLEAR OF DEBRIS, OR SNOW OR ICE. IS 32'3" WIDE, TWO LANE WITH NO MARKINGS. IS A ONE WAY WESTBOUND STREET WITH LANE LINE MARKINGS, AND PARKING ON THE RIGHT EDGE. IS 36 FEET WIDE. LEGAL PARKING ON IS 50-60 FEET BACK FROM THE INTERSECTION AND HAD A PASSENGER VAN PARKED CLOSEST TO HAS PARKING ON BOTH SIDES AND THERE WAS NO CARS PARKED CLOSE TO THE INTERSECTION TO AFFECT THE VISION OF DRIVER ONE. THE VIEW DRIVER ONE HAD AT THE FARTHEST SAFE POINT IN THE INTERSECTION IS ONE BLOCK OF THE RIGHT LANE AND 1 1/2 BLOCKS ON THE LEFT LANE.

WEATHER IS CLEAR, DRY, CALM AND 43 DEGREES.

0745 HRS RESPOND TO AND CONTACT DR. AND FOUND DRIVER ONE IS IN FAIR CONDITION, A PASSENGER IN VEHICLE TWO DOB HAS BEEN UPGRADED TO SERIOUS CONDITION WITH TRAUMA TO THE HEAD.

CONTACT WHO STATES HE JUST LEFT HOME A BLOCK AWAY. HE STOPPED FOR THE STOP SIGN FOR A SHORT TIME. NO CARS PASSED ON AND HE PULLED OUT BECAUSE HE SAW NO CARS. WHEN HE SAW THE BLUE CAR IT WAS GOING TOO FAST FOR HIM TO GET OUT OF THE WAY.

CONTACT WHO STATES SHE JUST CAME FROM HOME ON STREET. SHE WAS TRAVELING AS A LONE CAR ABOUT 25 MPH IN THE LEFT LANE. WHEN SHE SAW THE CAR COME OUT IN FRONT OF HER SHE TRIED TO STOP BUT SHE HAD NO TIME. SHE STATES THE SEAT AND SHOULDER BELTS WERE STILL AROUND THE CHILD SEAT AFTER THE ACCIDENT. THE AIR BAG WAS KIND OF DRAPED AROUND THE CHILD AT THAT TIME.

1045 HRS CONTACT ICU AT AND FOUND THE PASSENGER IS IN SERIOUS CONDITION WITH A SUBDURAL HEMATOMA AND SKULL FRACTURE.

0945 HRS INFORMATION FROM IS IS IN SERIOUS CONDITION IN INTENSIVE CARE. IS IN GOOD CONDITION.

1100 HRS INFORMATION FROM IS IS STILL IN SERIOUS CONDITION AND IS IN GOOD CONDITION.

0700 HRS INFORMATION RECEIVED FROM DETAIL THREE DET. IS THAT DRIVER ONE DIED 112195 AT 2200 HOURS AT HE WAS PRONOUNCED DEAD AT 2200 HOURS BY AND THE CAUSE IS UNKNOWN AT THIS TIME.

0930 HRS CONTACT AND FOUND HAS BEEN RELEASED FROM THE HOSPITAL. INFORMATION FROM THE CORONERS OFFICE IS THE CAUSE OF DEATH ON IS BLUNT TRAUMA AS A RESULT OF INJURIES IN THIS ACCIDENT.

THIS CASE IS COMPLETED CLEAR BY TICKET.

Police Department STATEMENT

Name (Last, First, Middle Initial)		Making Statement is: <input checked="" type="checkbox"/> Officer <input type="checkbox"/> Witness <input type="checkbox"/> Person advised			
Residence Street Address		City	County	State	Zip Code
Residence Phone ()	Business Phone ()		Social Security No.		Date of Birth / Serial No.
Business Street Address		City	County	State	Zip Code
Officer Taking Statement <u>SAME</u>		Serial No.	Date	Time <u>0700</u> Hours	
Concerning an incident occurring at:			Location where statement taken: <u>SAME</u>		

Summary of Statement:

ON WHILE WORKING CAR AT APPROXIMATELY 0651
HOURS I RESPONDED TO TO ASSIST CAR
ON AN ACCIDENT WITH UNKNOWN INJURIES. UPON ARRIVAL
I ASSISTED WITH TRAFFIC CONTROL.

I have read the foregoing statement and the facts contained therein are true to the best of my knowledge and belief. I do not maintain that it contains all of the facts or details of the incident, but only those facts about which I have been asked.

11 / 1 / 0715
 Date ☒ AM ☐ PM
 Time Statement Completed

Signature of Person Making Statement



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Page 1 of 1 Pages

Case No. _____

Police Department STATEMENT

Name (Last, First, Middle Initial)		Making Statement is: <input checked="" type="checkbox"/> Officer <input type="checkbox"/> Witness <input type="checkbox"/> Person advised			
Residence Street Address		City	County	State	Zip Code
Residence Phone ()	Business Phone ()		Social Security No.		Date of Birth / Serial No.
Business Street Address		City	County	State	Zip Code
Officer Taking Statement <u>SAME</u>		Serial No.	Day	Time <u>0700</u> Hours	
Concerning an incident occurring at: <u>ST.</u>			Location where statement taken: <u>SAME</u>		

Summary of Statement:

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Date 0715 ☒ AM
☐ PM
 Time Statement Completed

Signature of Person Making Statement



Police Department
STATEMENT

NAME (LAST, FIRST, MIDDLE INITIAL)		MAKING STATEMENT IS:			
		<input checked="" type="checkbox"/> Officer <input type="checkbox"/> Witness <input type="checkbox"/> Person advised			
RESIDENCE STREET ADDRESS		CITY	COUNTY	STATE	ZIP CODE
RESIDENCE PHONE ()	BUSINESS PHONE ()	SOCIAL SECURITY NO.		DATE OF BIRTH / SERIAL NO.	
BUSINESS STREET ADDRESS		CITY	COUNTY	STATE	ZIP CODE
OFFICE MAKING STATEMENT		SERIAL NUMBER	DATE	TIME <u>0715</u> Hours	
CONCERNING AN INCIDENT OCCURRING AT			LOCATION WHERE STATEMENT TAKEN <u>SAME</u>		

SUMMARY OF STATEMENT

WHILE WORKING CAR ON
 I RESPONDED TO A 2-CAR ACCIDENT. I HELPED
 TO CALM DOWN THE MOTHER OF AN INJURED CHILD
 SHE USED MY CAR PHONE TO CONTACT HER WORK

I have read the foregoing statement and the facts contained therein are true to the best of my knowledge and belief. I do not maintain that it contains all of the facts or details of the incident, but only those facts about which I have been asked.

Date
0725

Time Statement Completed

☒ AM
☐ PM

Signature of person making statement